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Title: VARACTOR APPARATUSES

AND METHODS

Applicant: Musalem et al.

Atty Docket: 1426/21/2

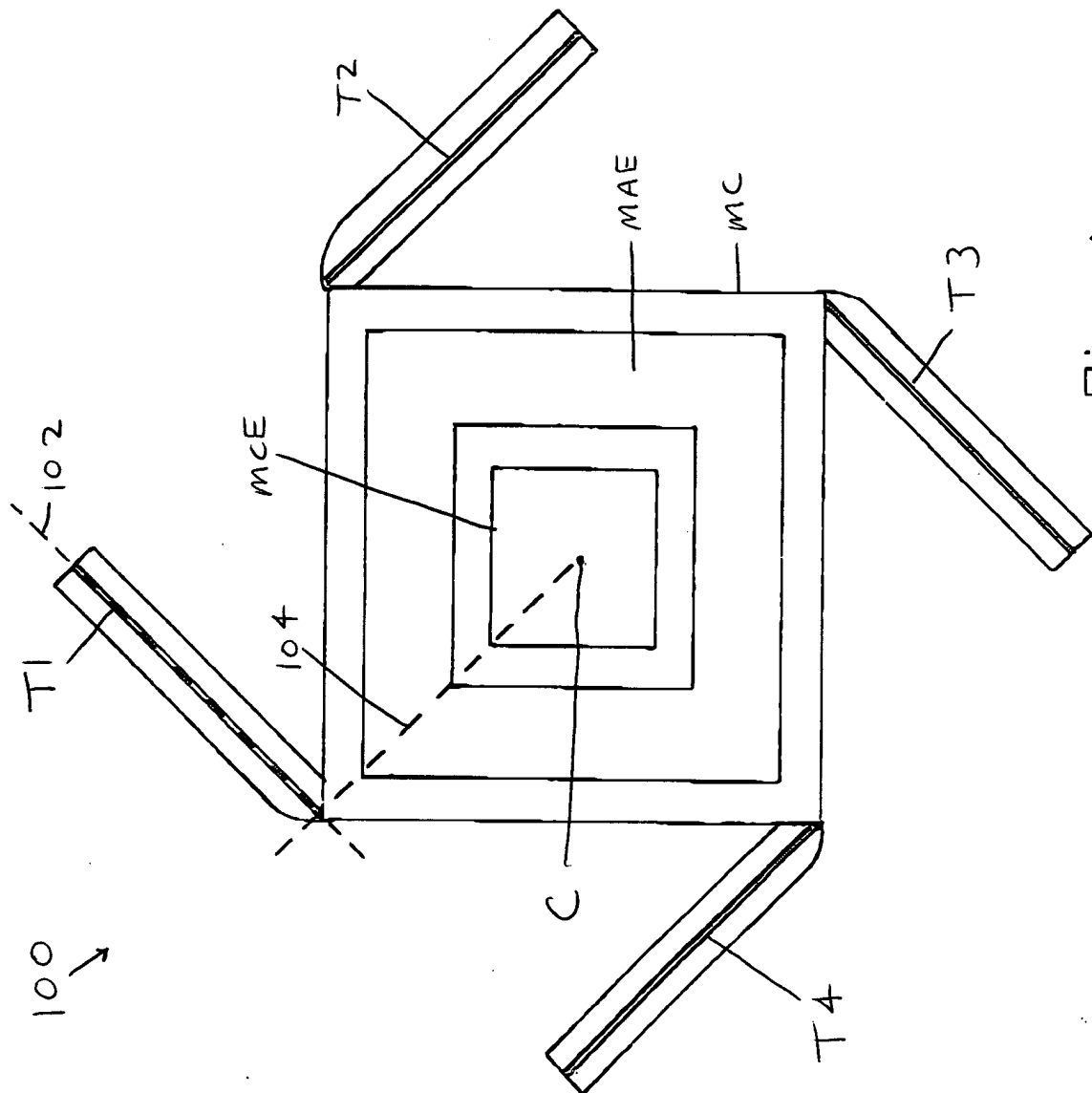


Fig. 1

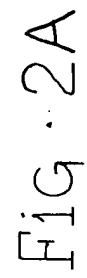


Fig. 2A

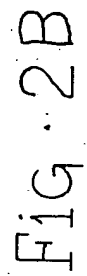


Fig. 2B

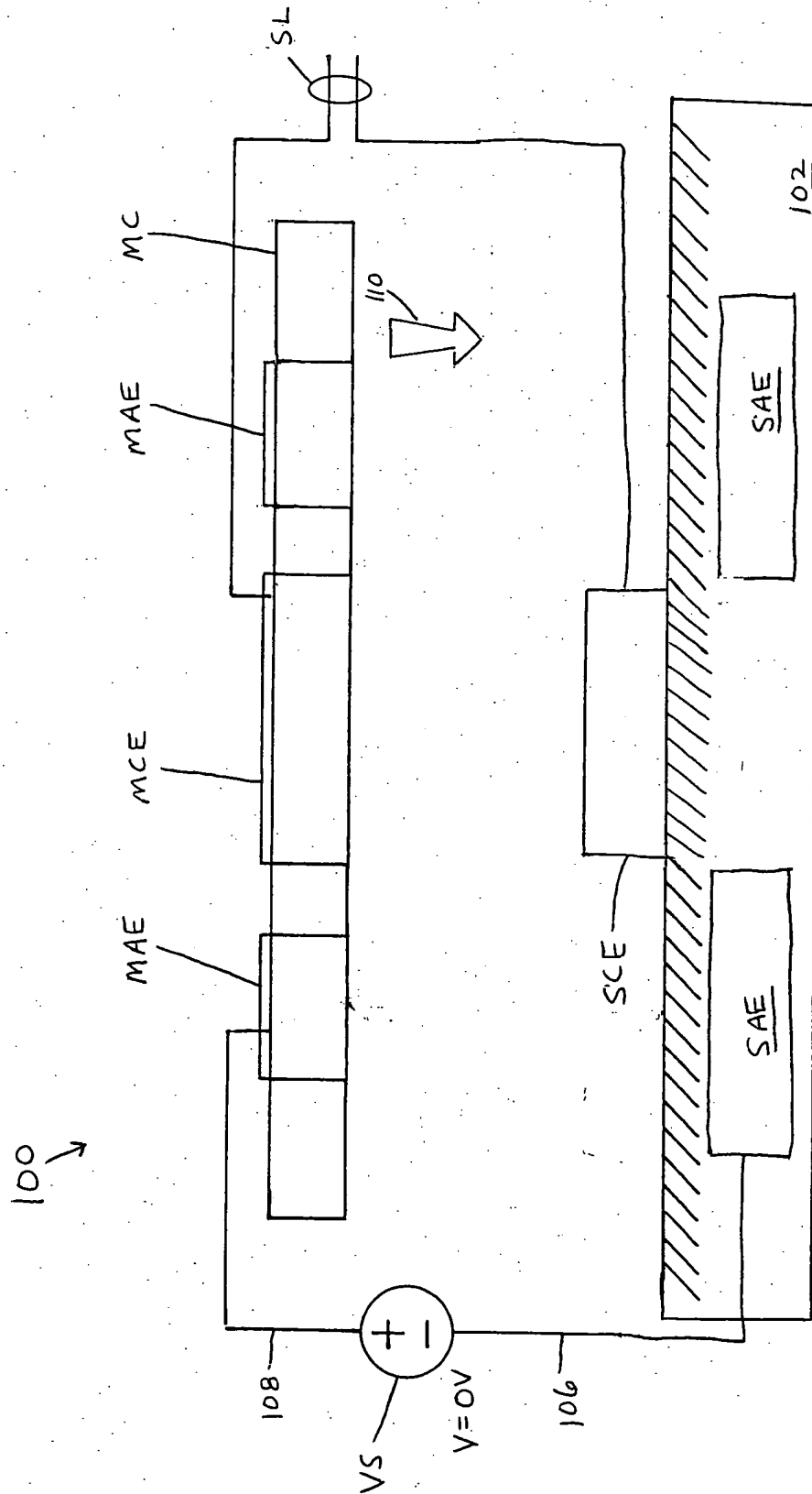


Fig. 2.C

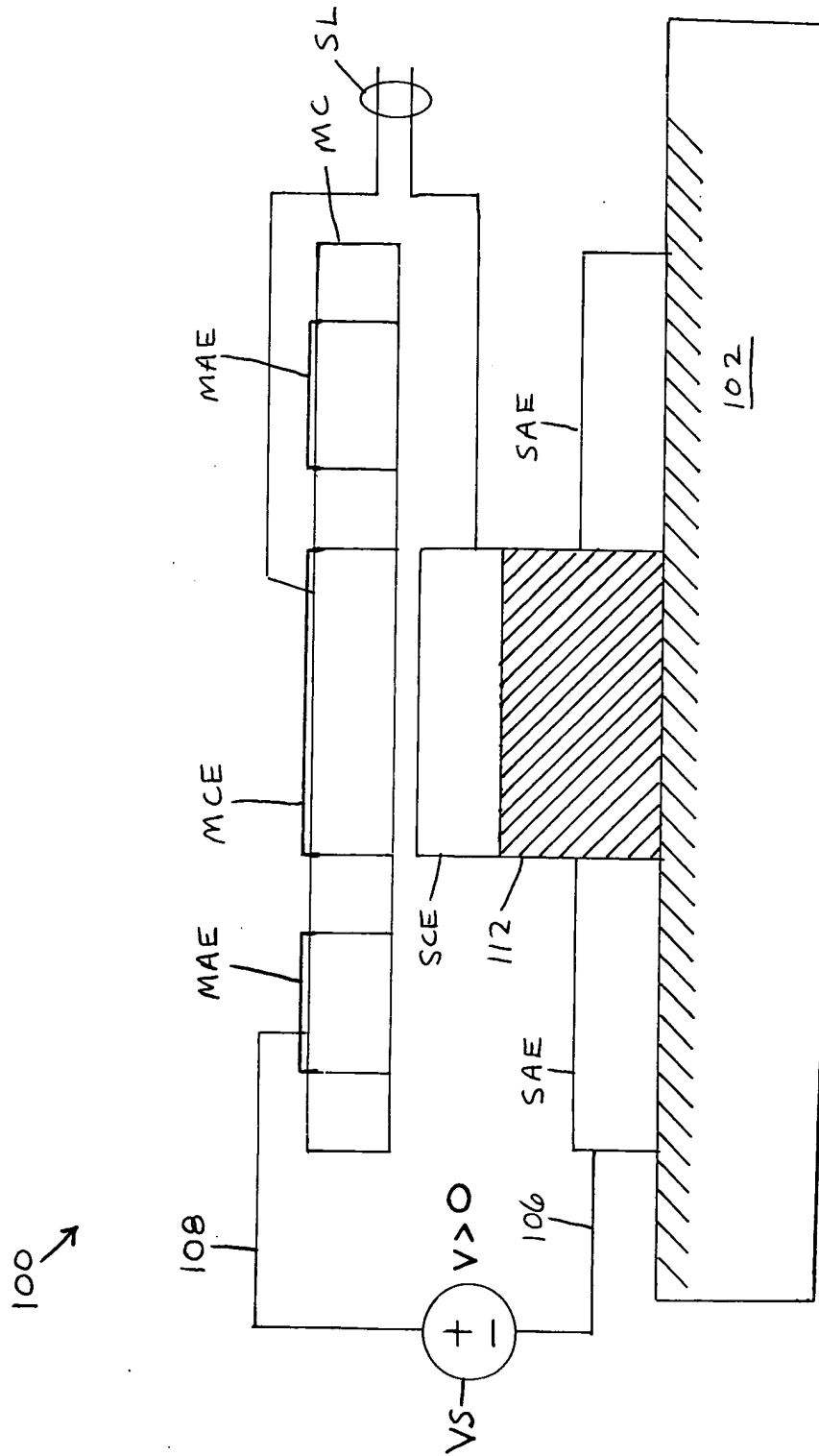


Fig. 3

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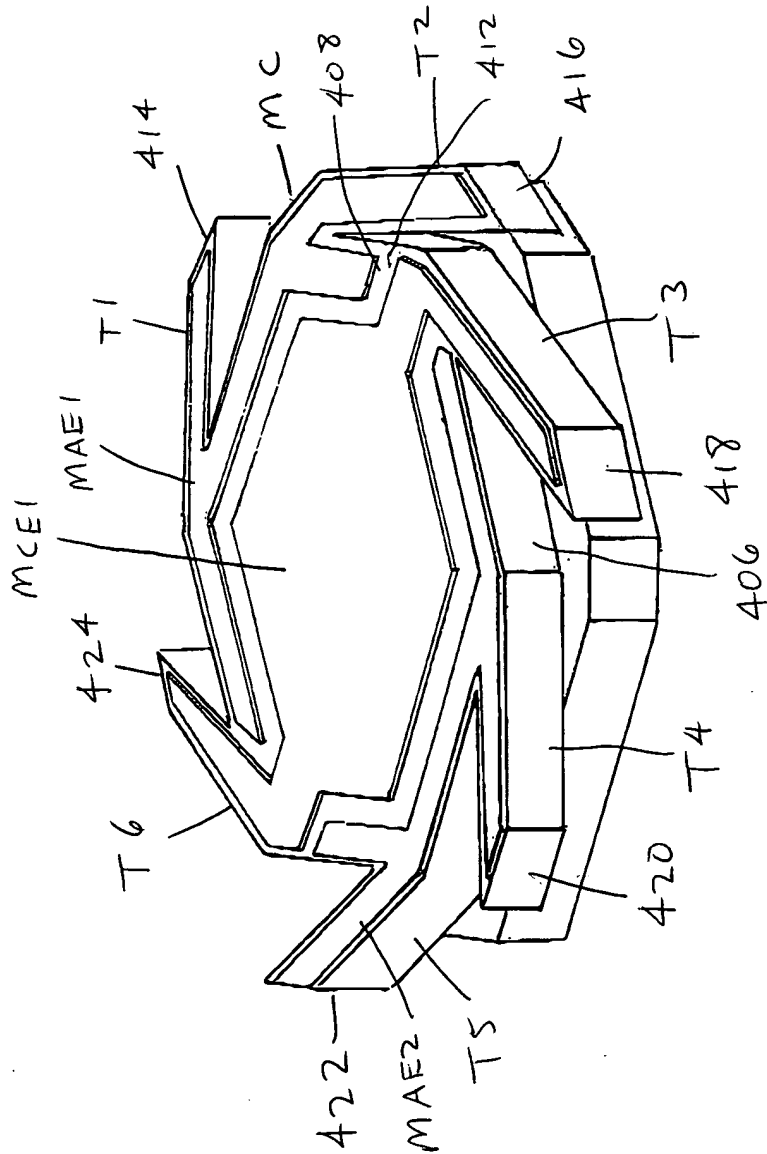


Fig. 4

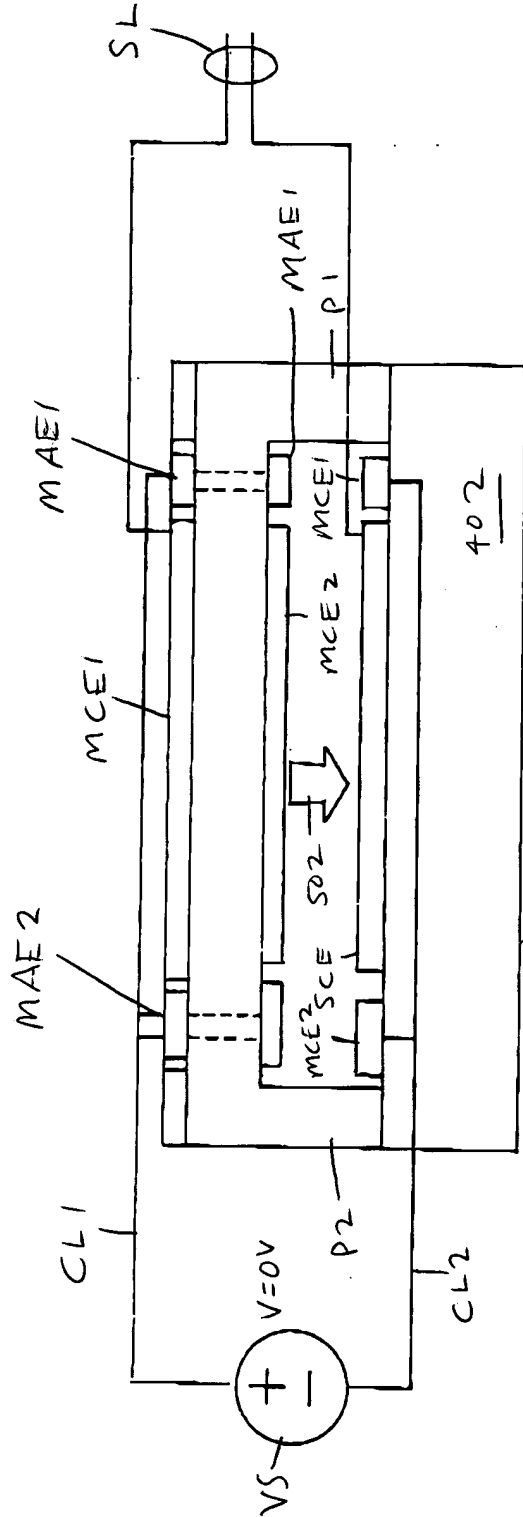


Fig. 5

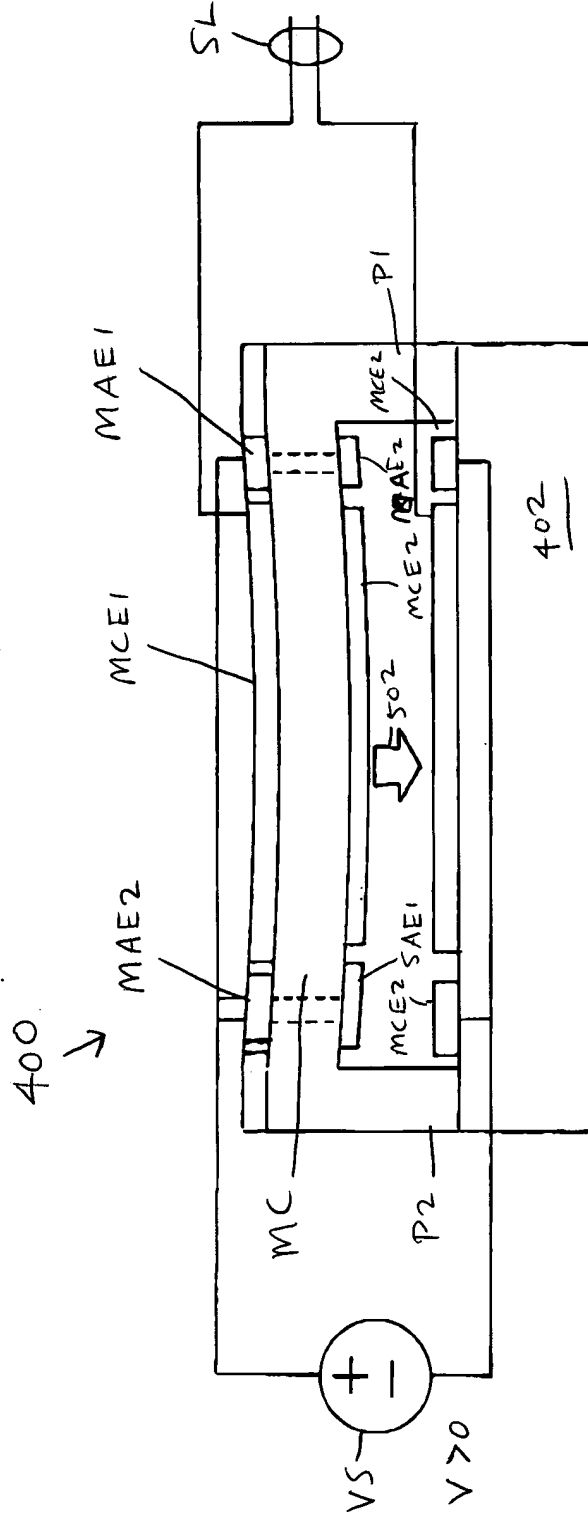


Fig. 6

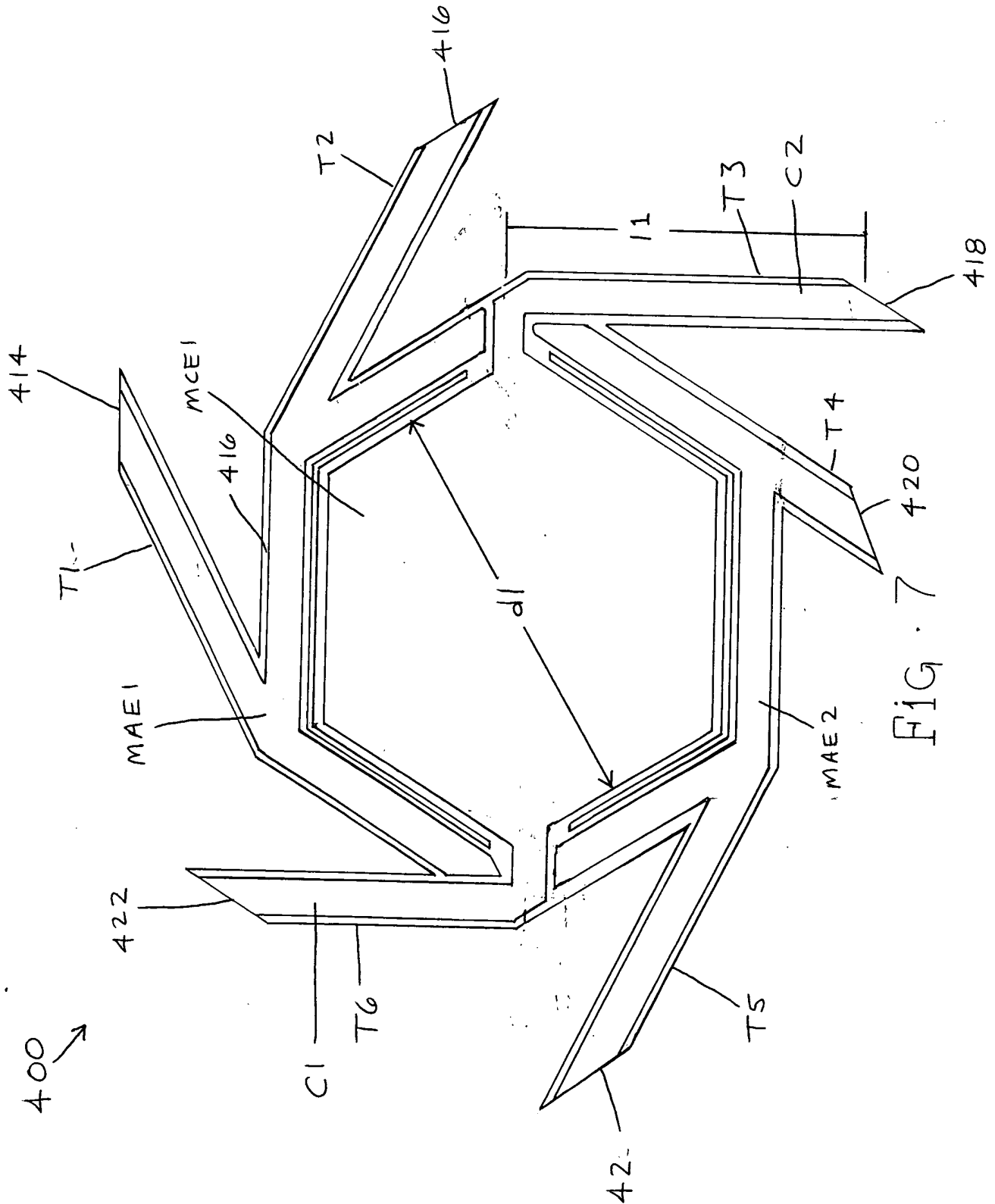
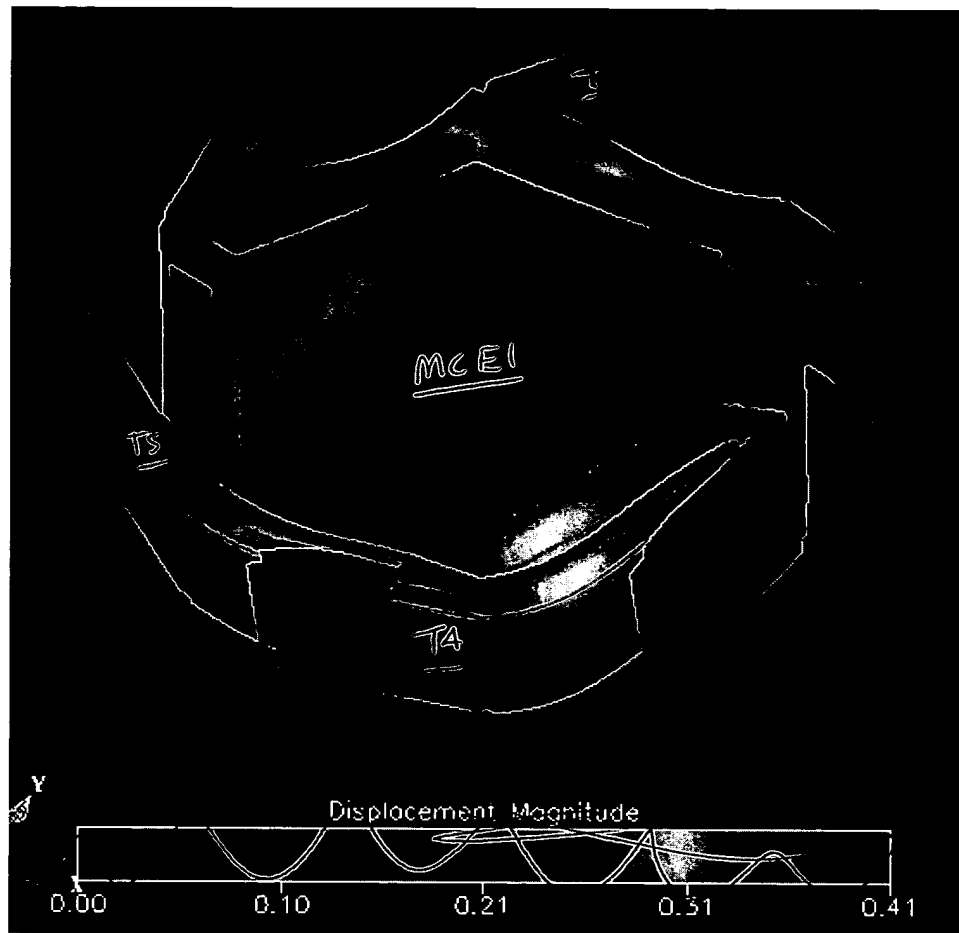


FIG. 8

400
↓

Bob,
This drawing
should ~~not~~ be
similar to
Figure 4
except the
structures are
deformed
downward and
also please
add the same
bottom structure
as shown in
Figure 4.



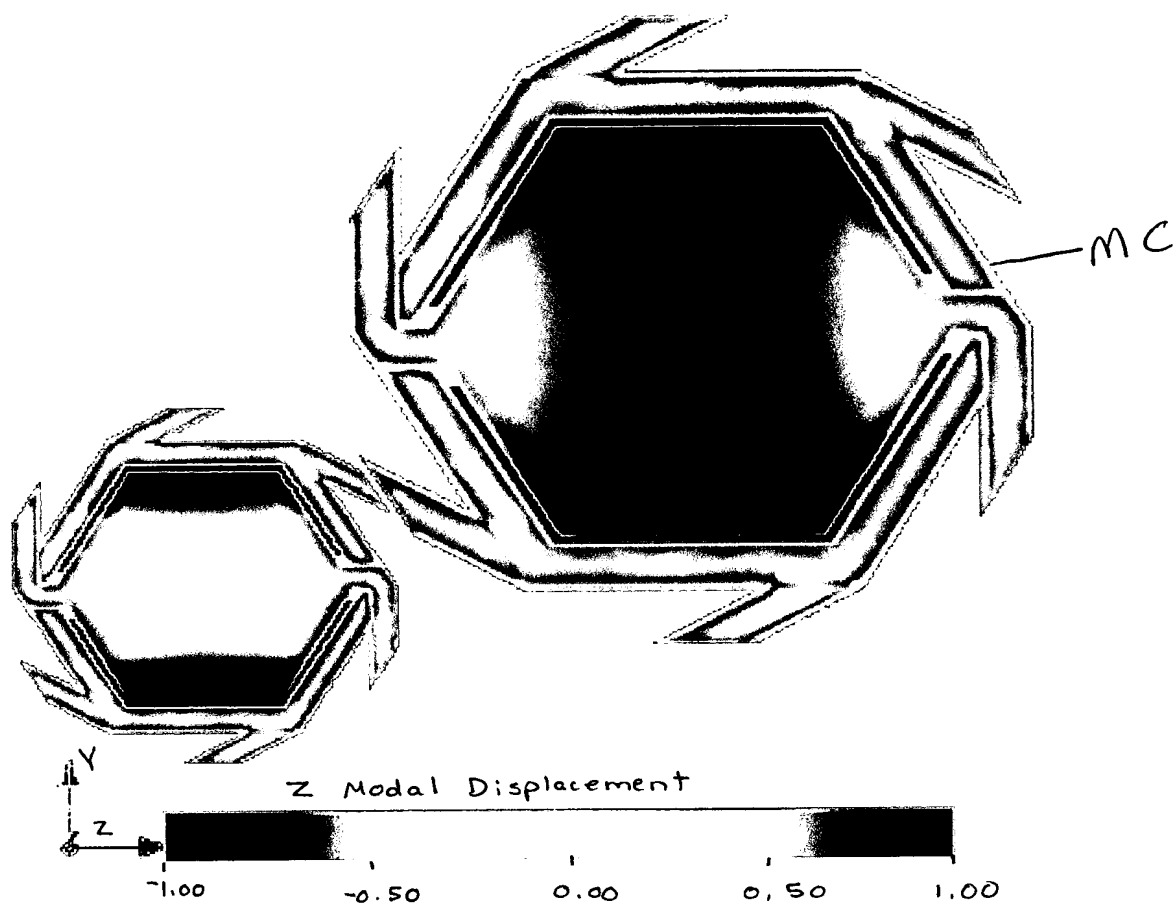


FIGURE 9

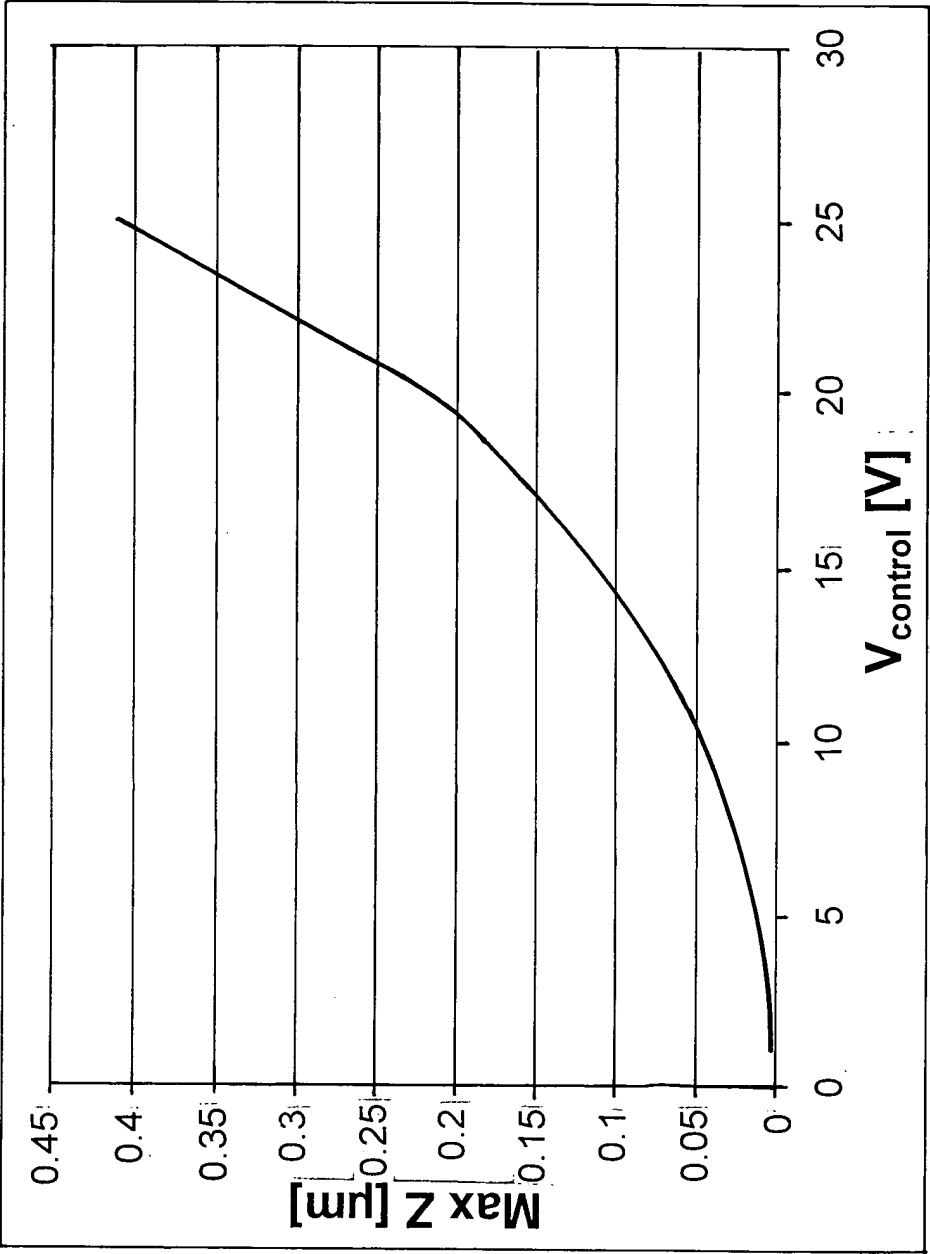


Fig. 10

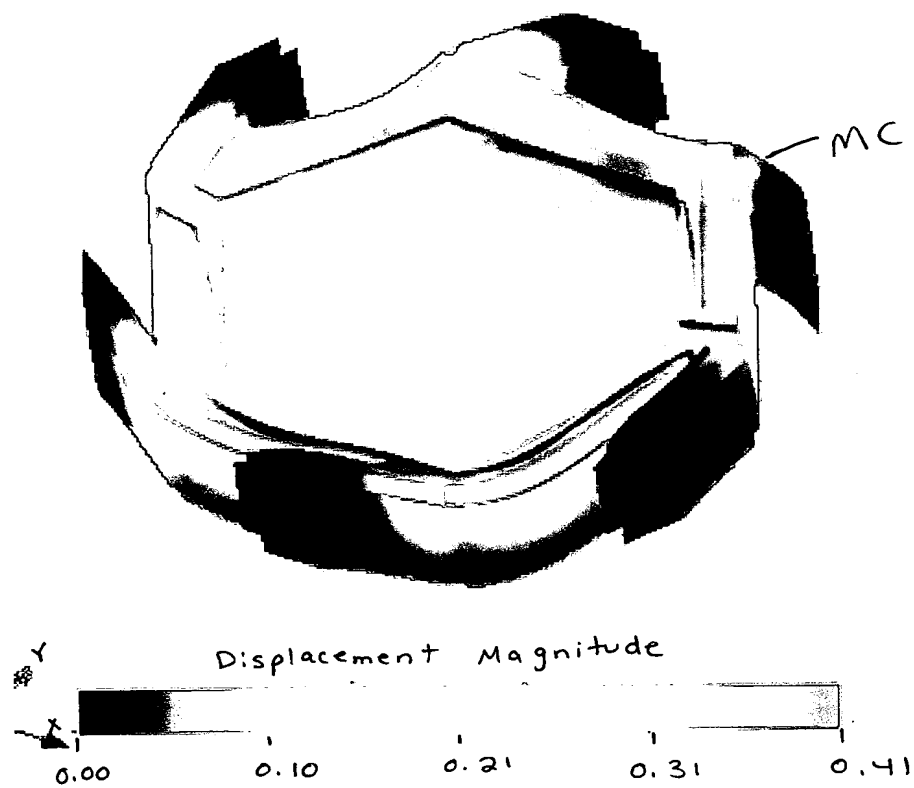


FIGURE 11

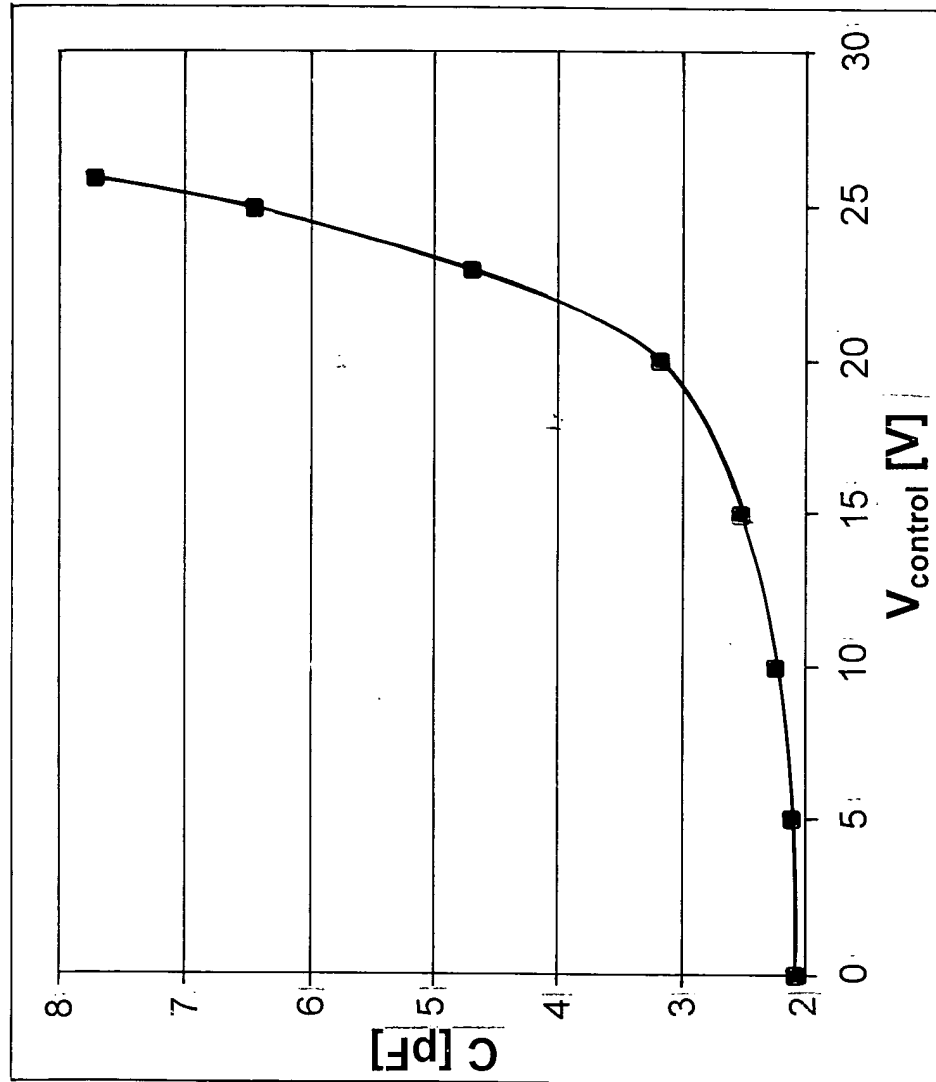


Fig. 12

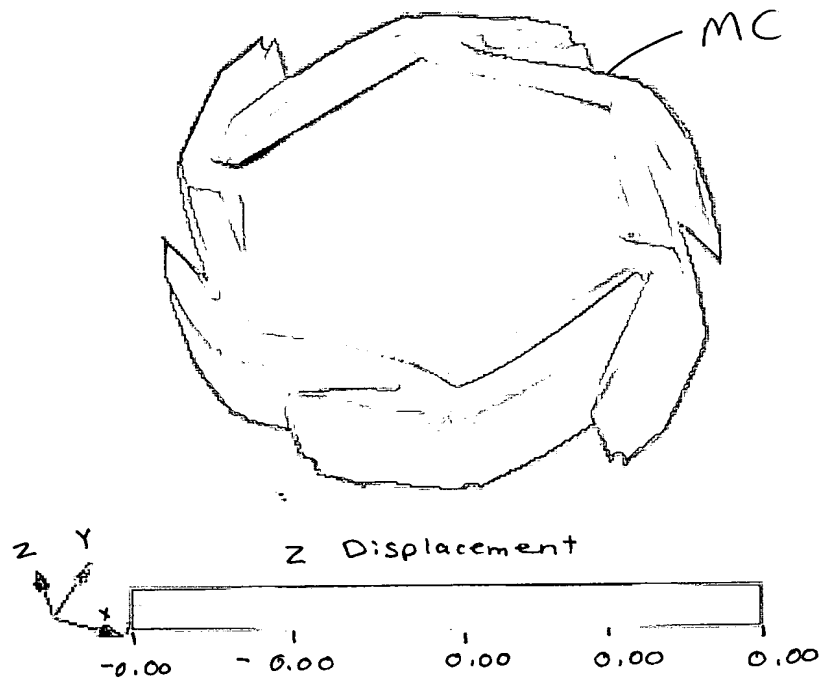


FIGURE 13A

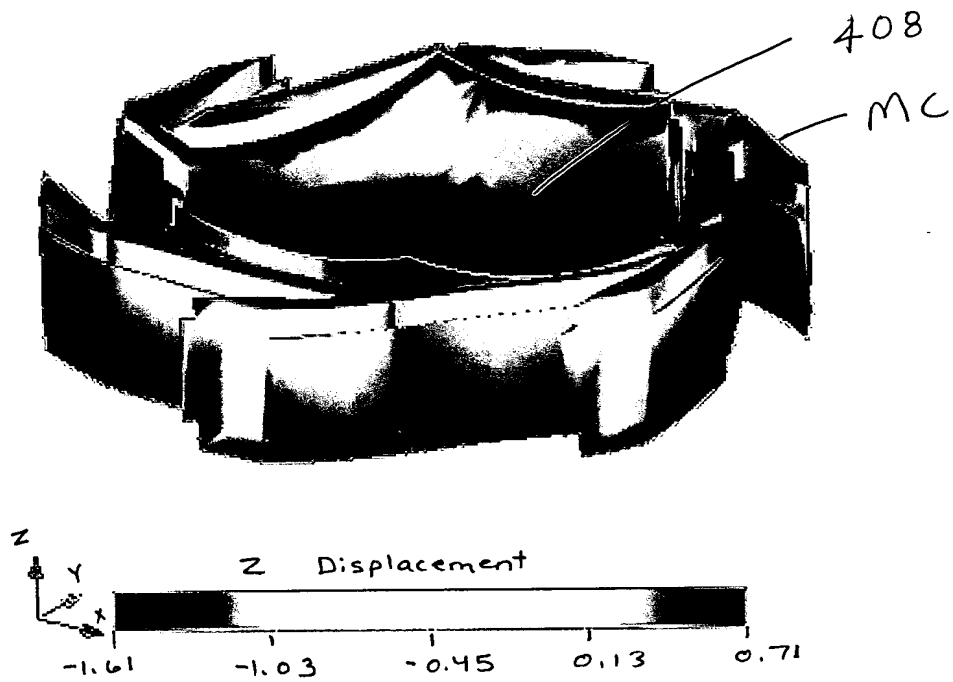


FIGURE 13B

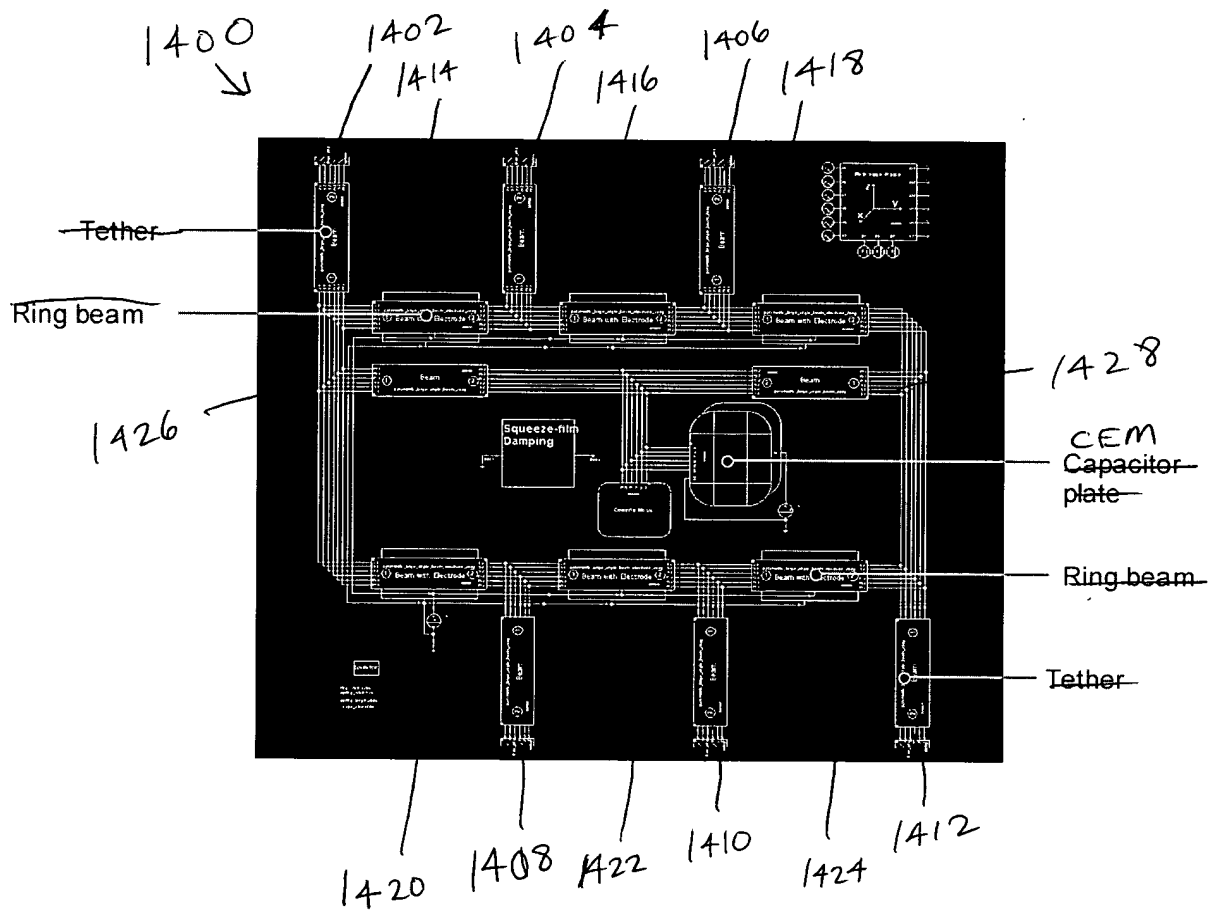


FIG. 14

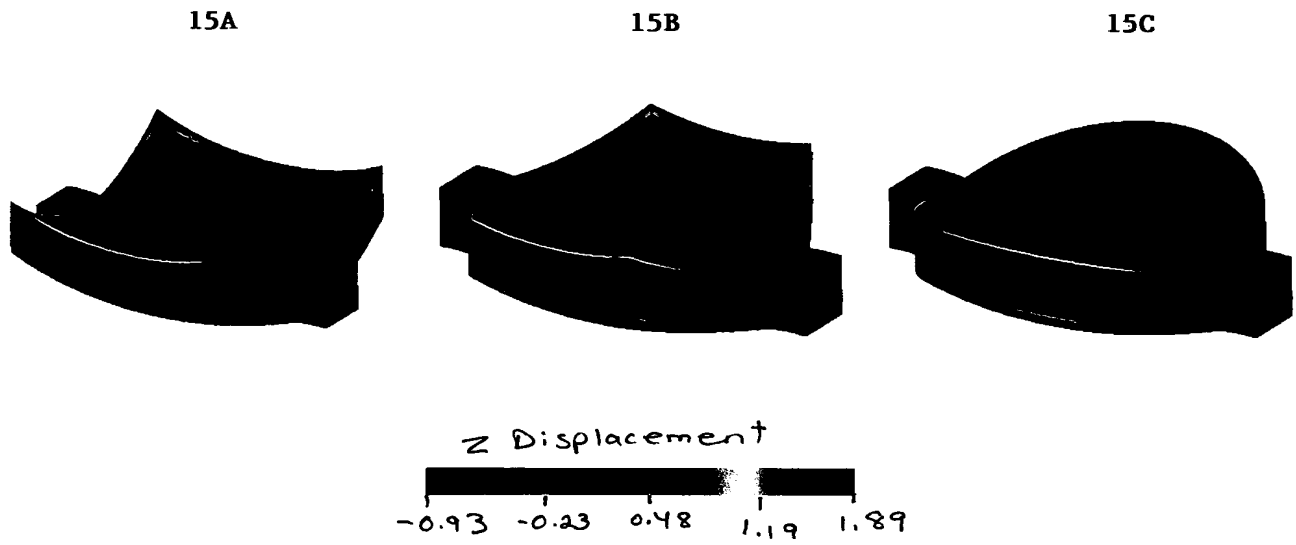


FIGURE
15

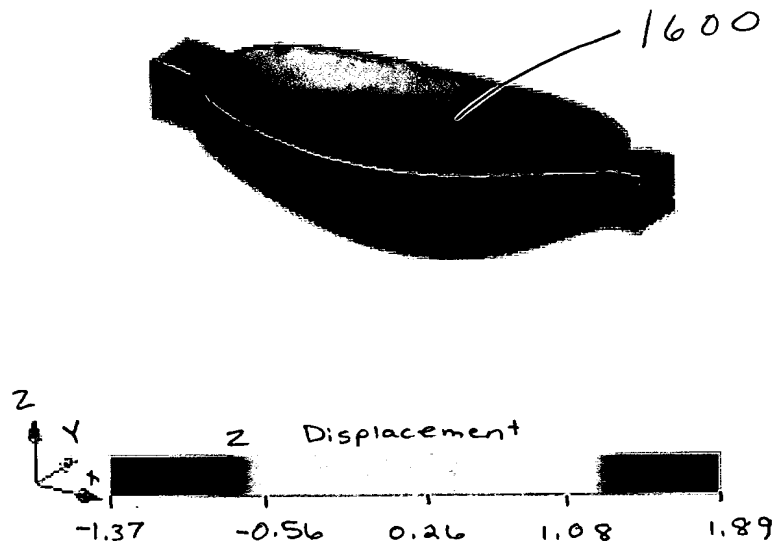


FIGURE 16

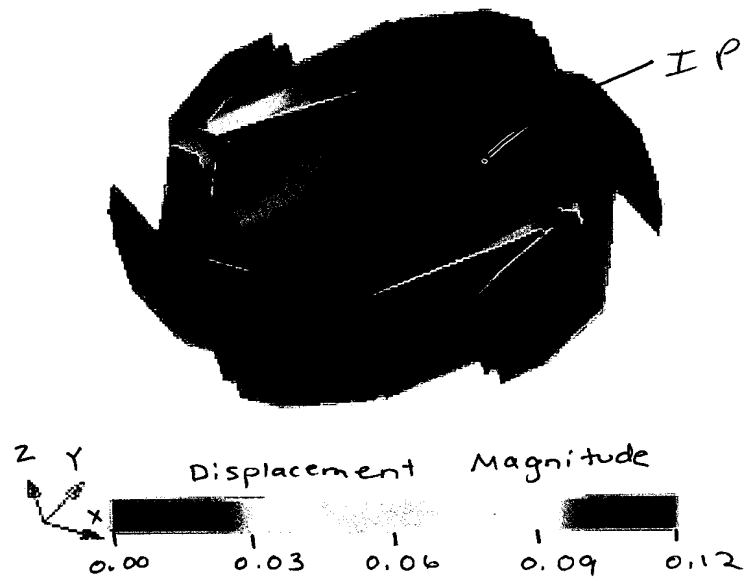
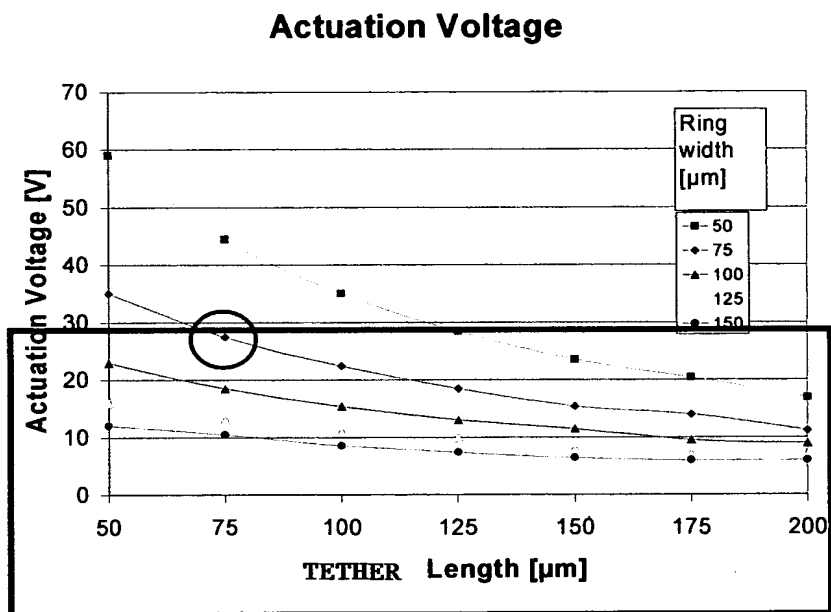


FIGURE 17

FIGURE 18



Resonance Frequency

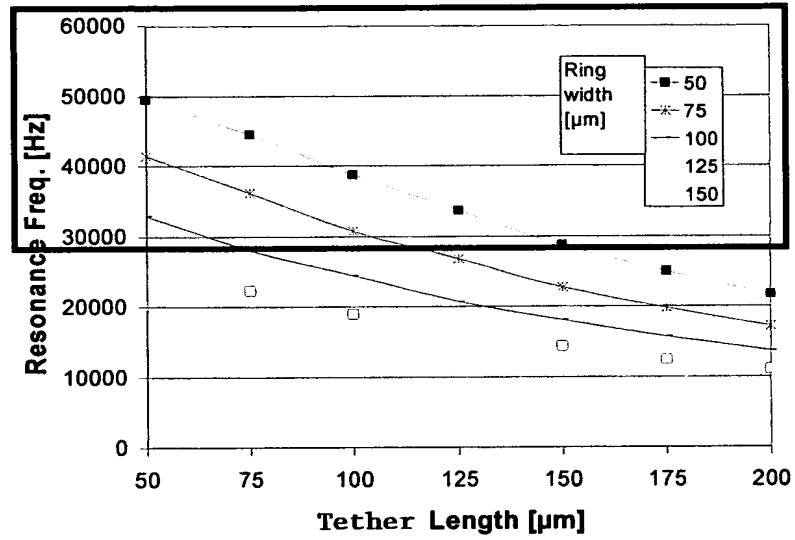


FIGURE 19

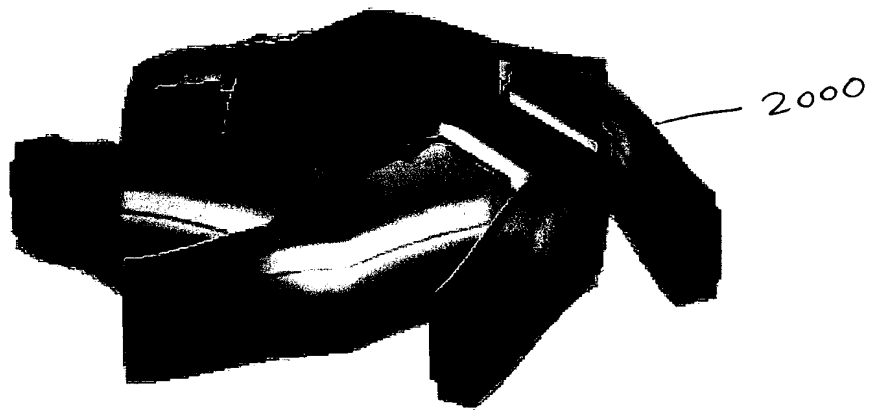


FIGURE 20

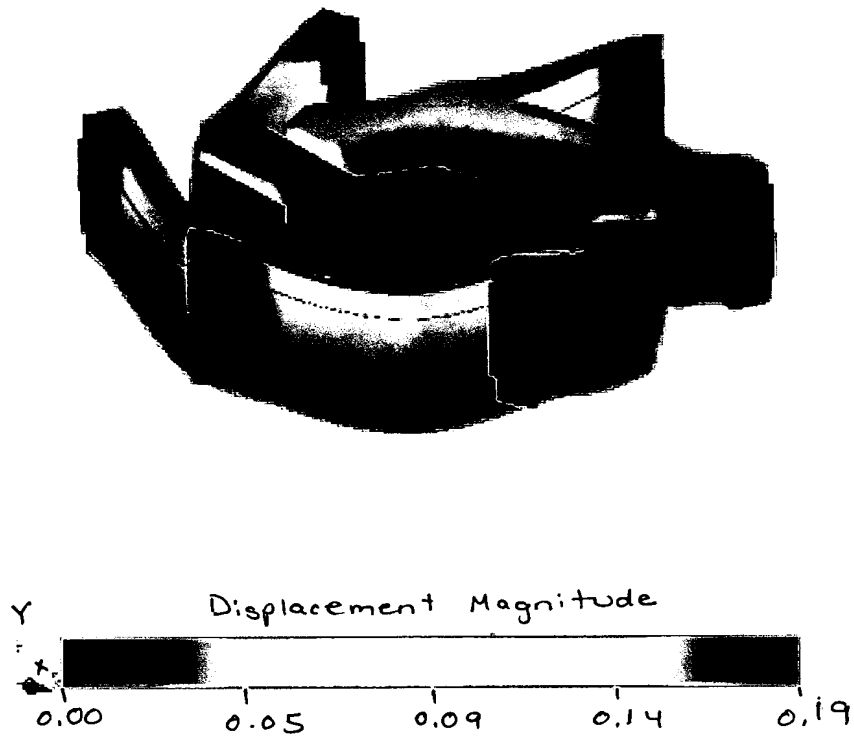


FIGURE 21

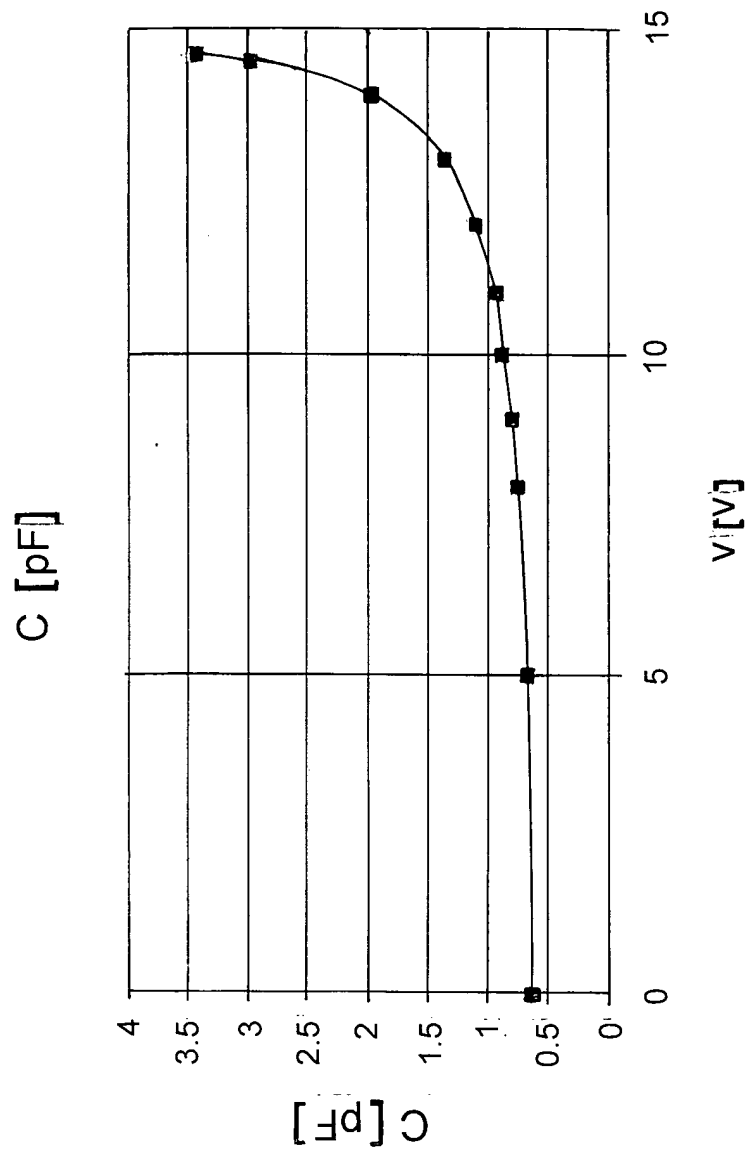


Fig. 22

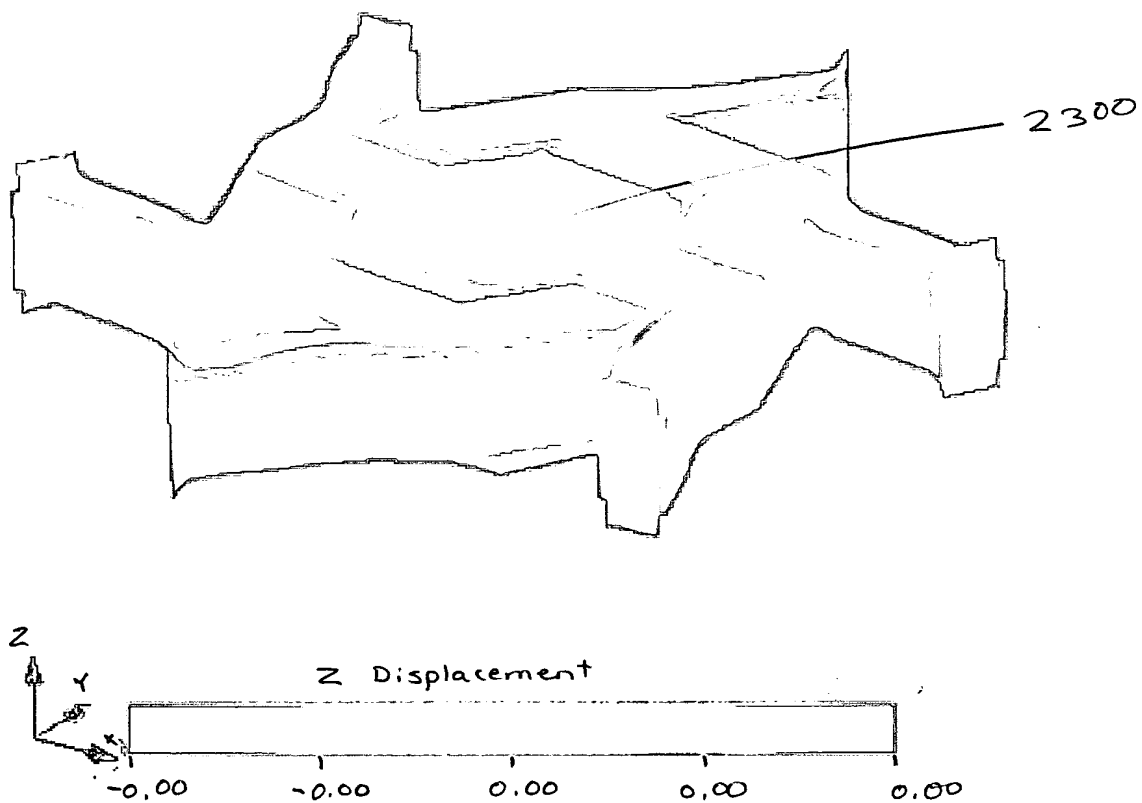


FIGURE 23

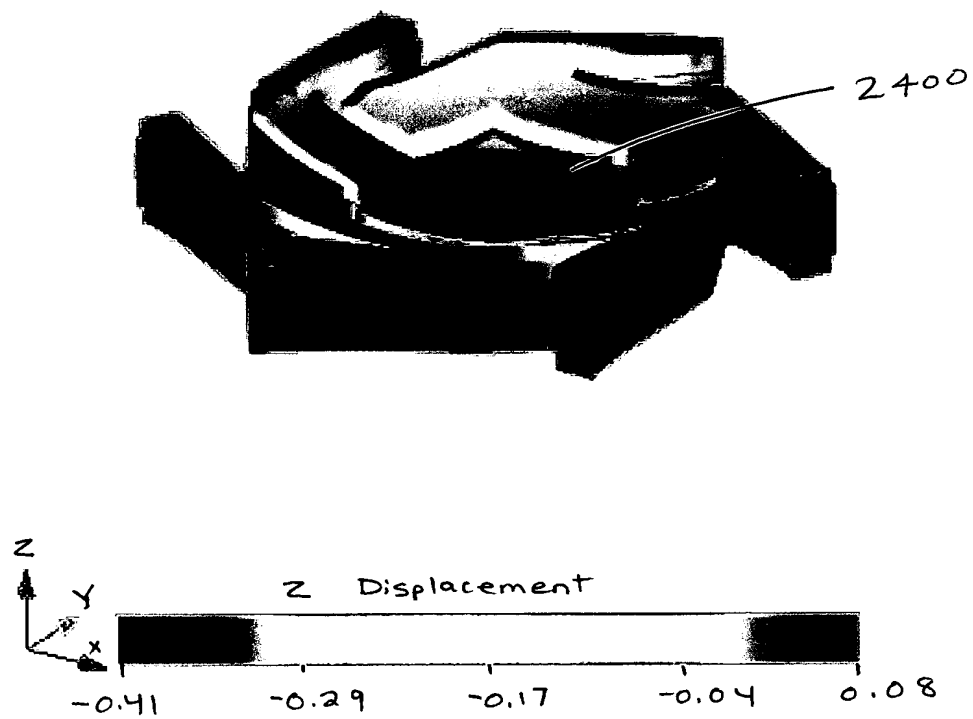


FIGURE 24

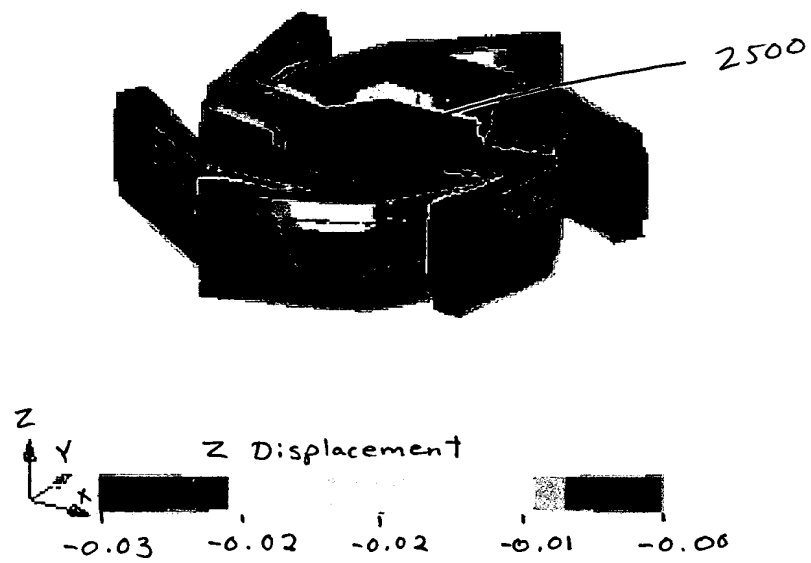


FIGURE 25

Title: VARACTOR APPARATUSES
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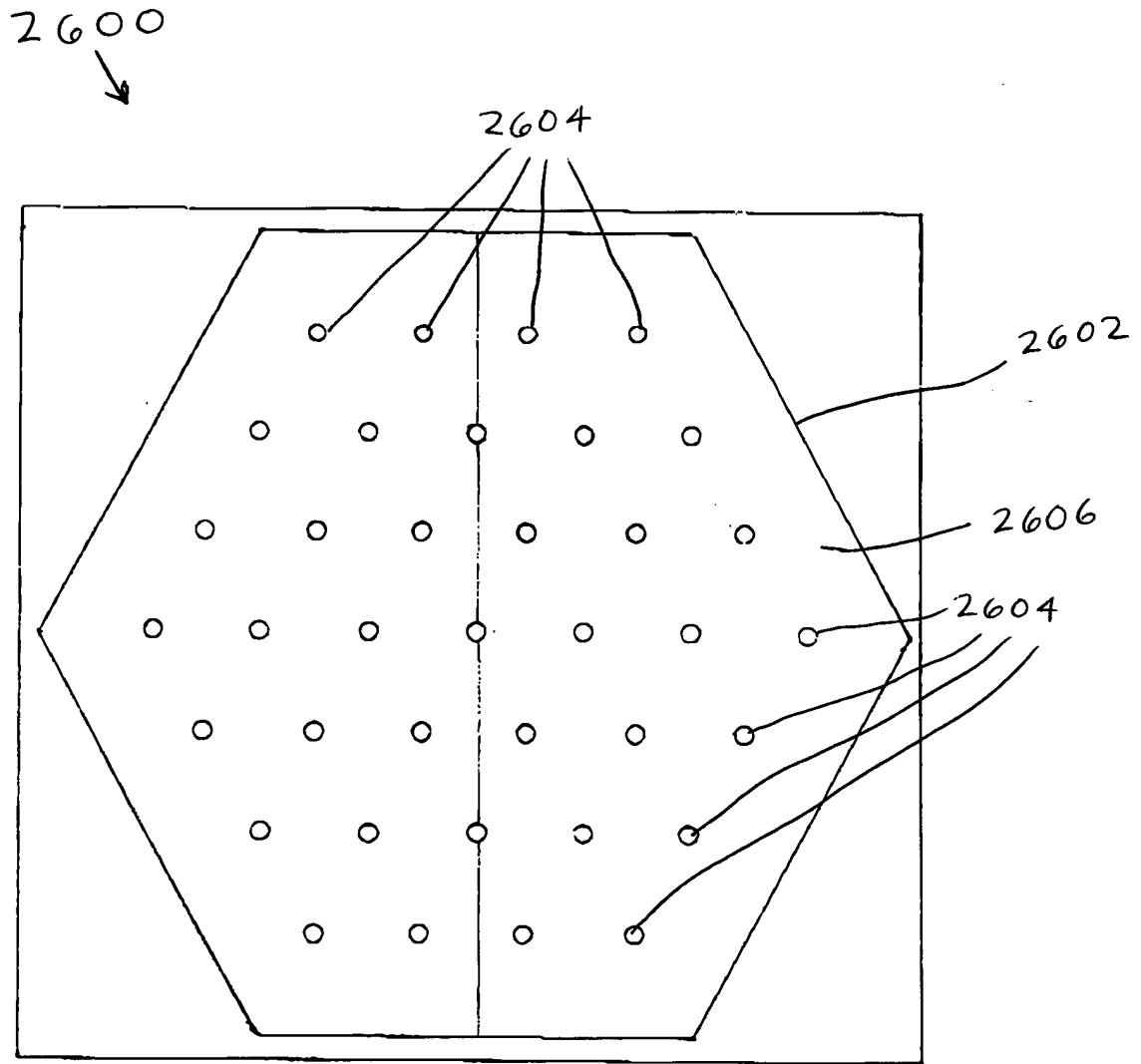


Fig. 26

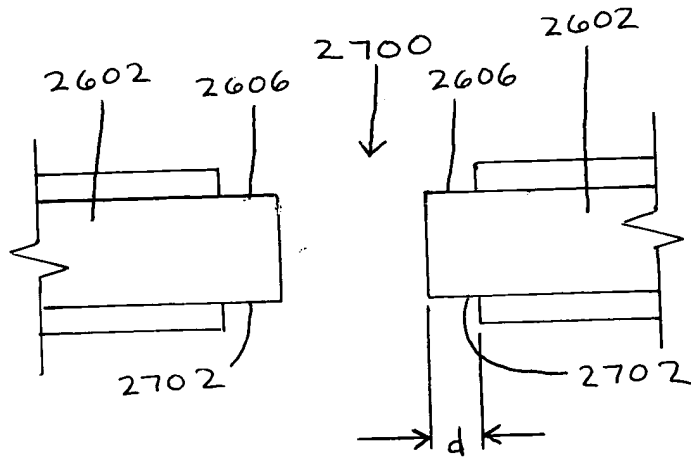


Fig. 27A

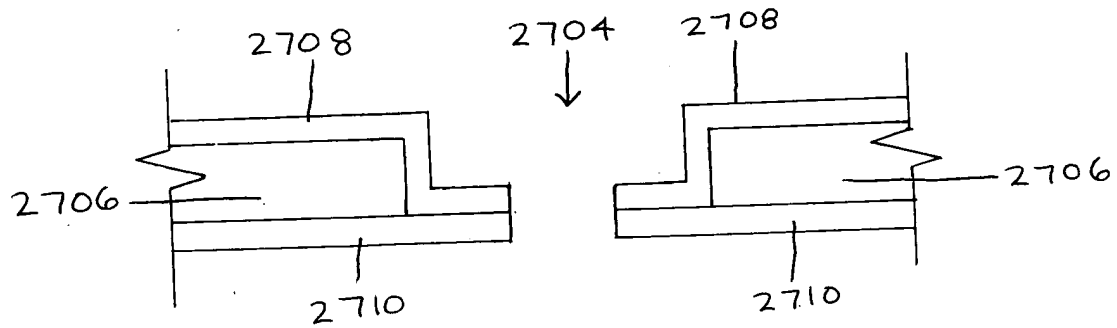


Fig. 27B

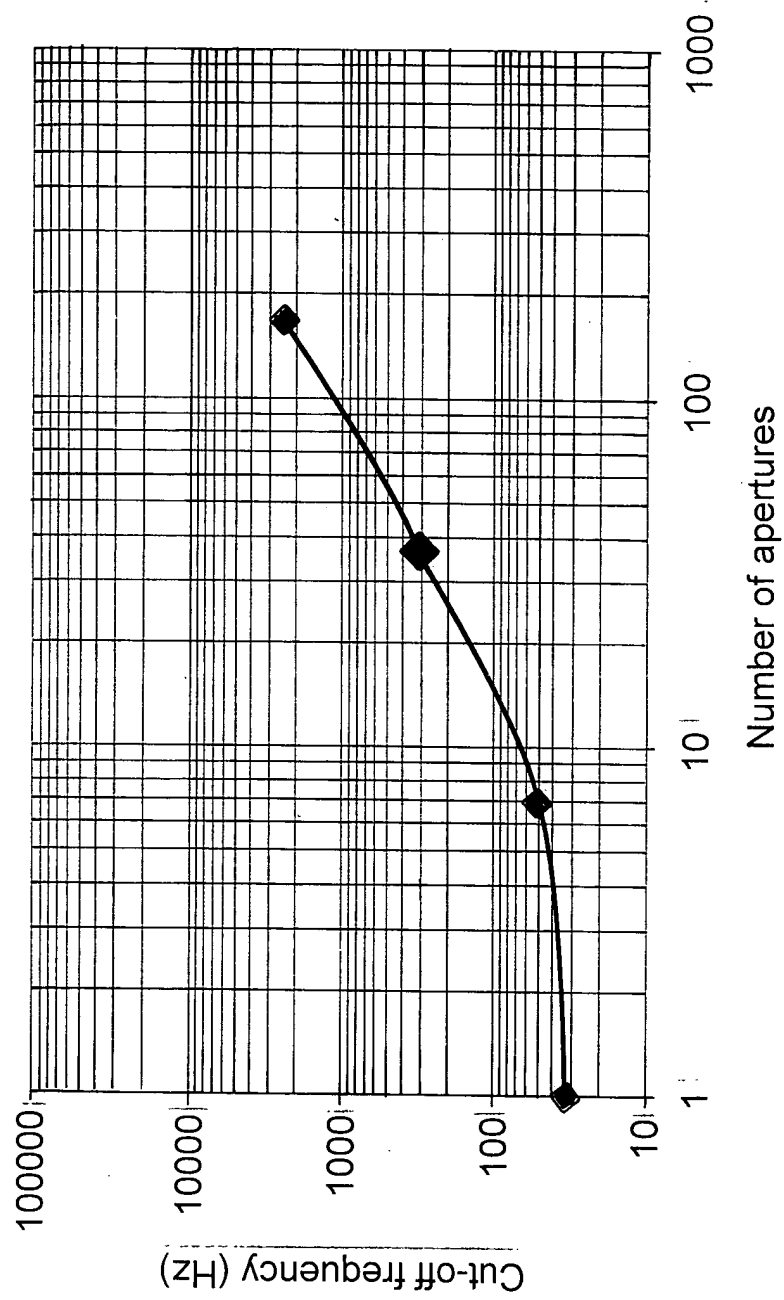


Fig. 28

Damping and spring forces

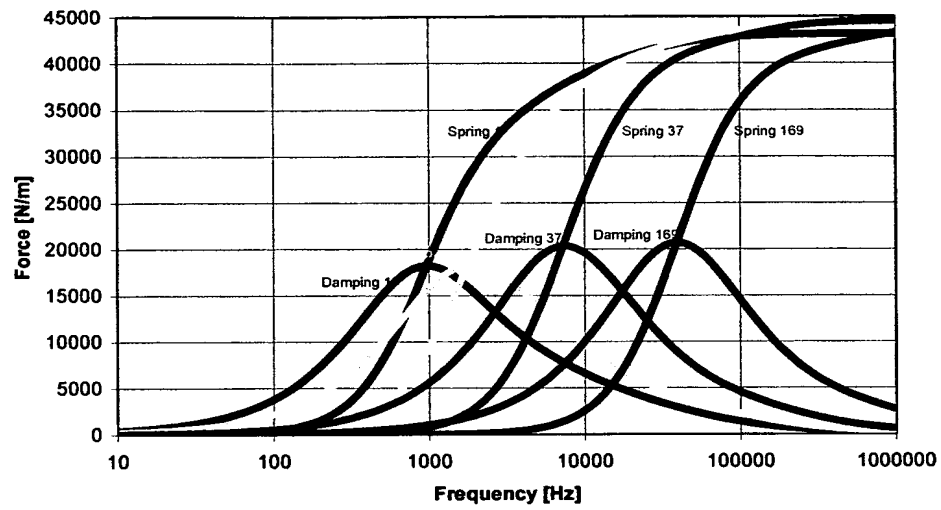


FIGURE 29

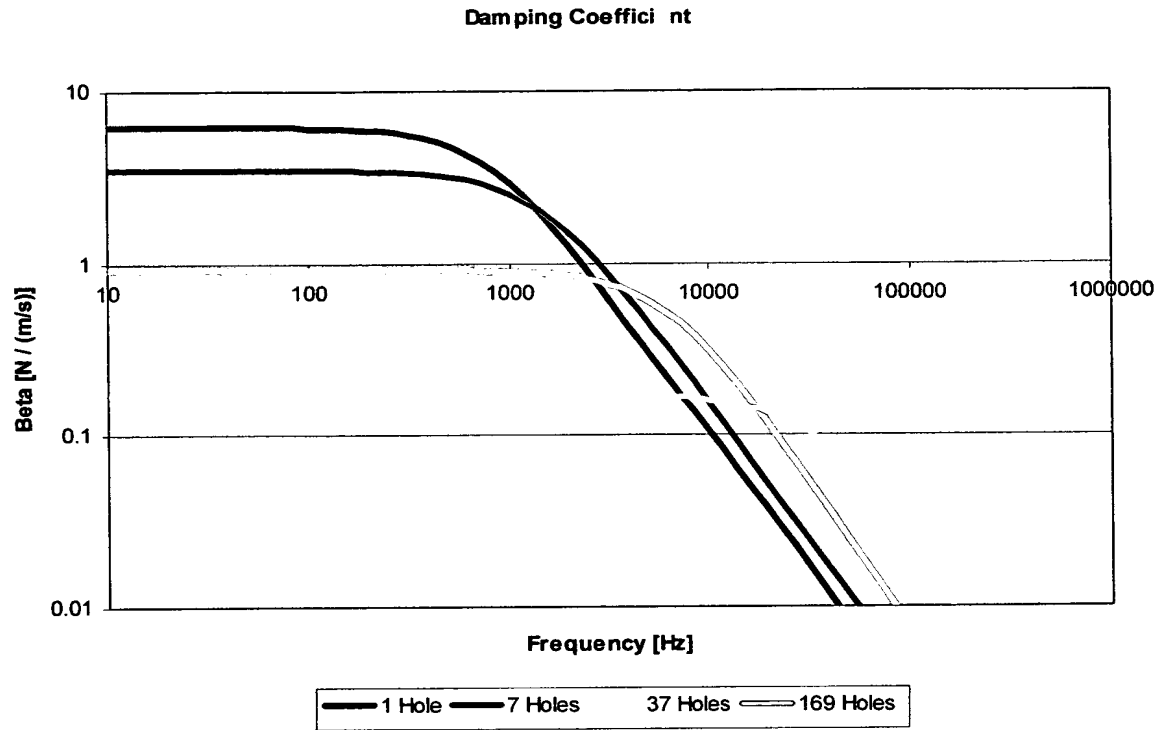


FIGURE 30

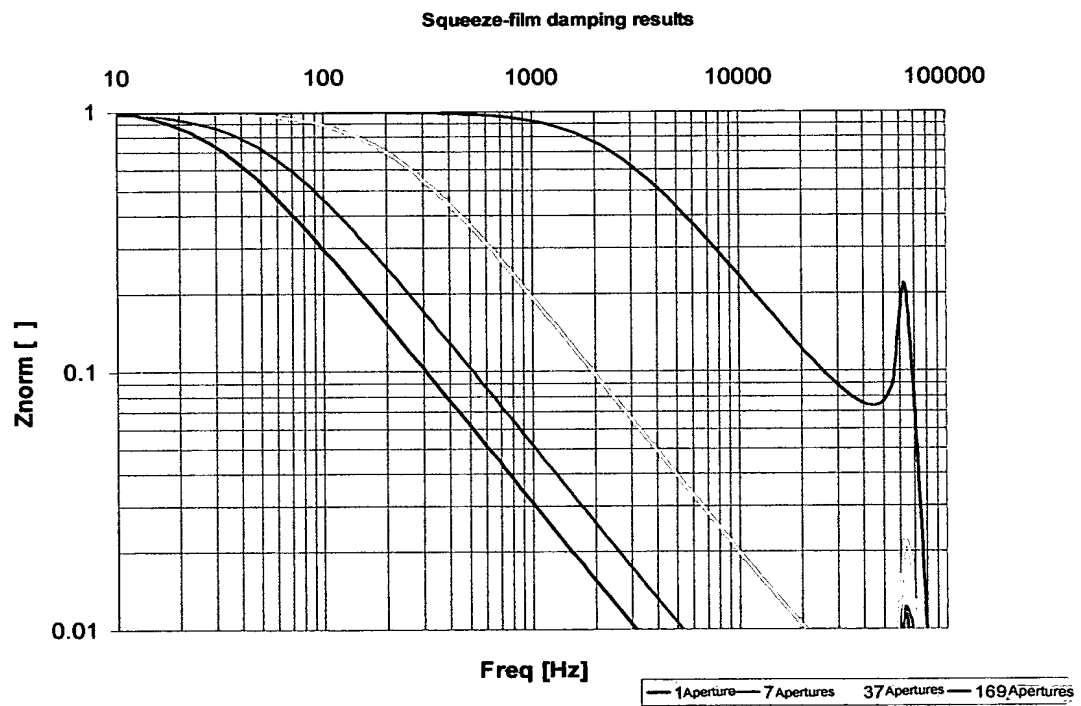


FIGURE 31

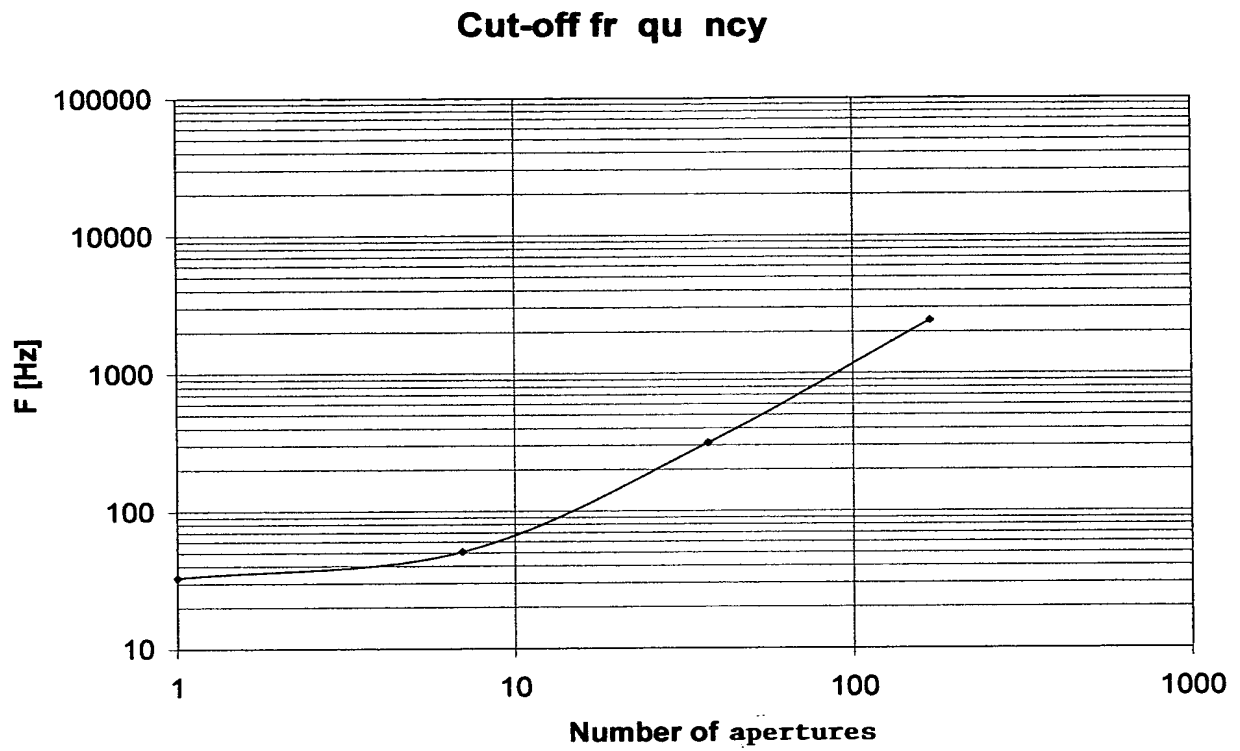


FIGURE 32

Effective area

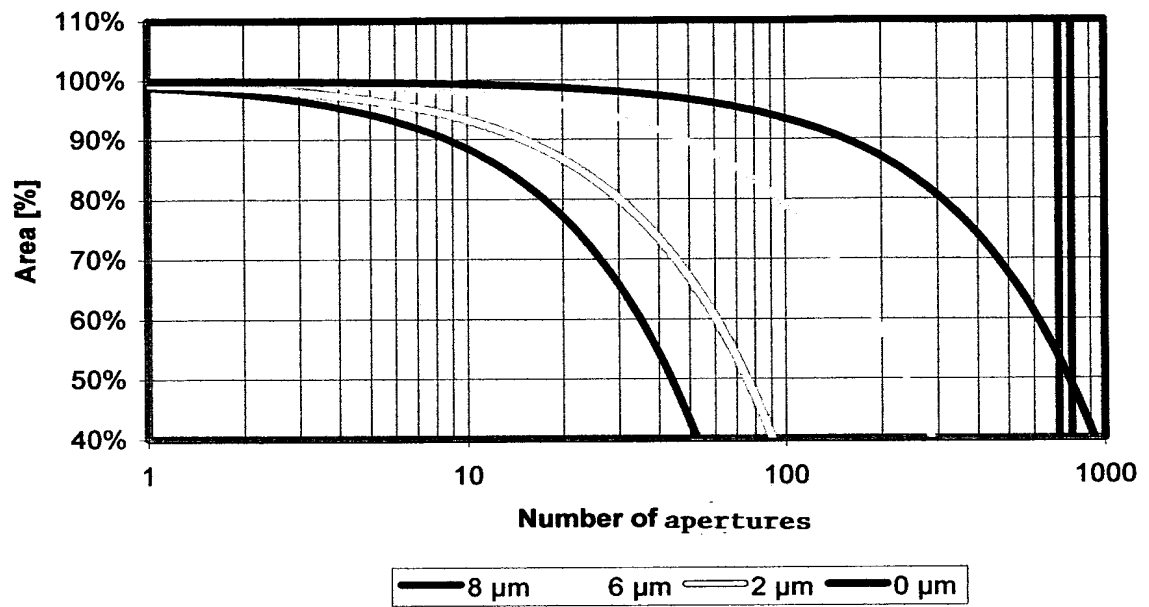


FIGURE 33

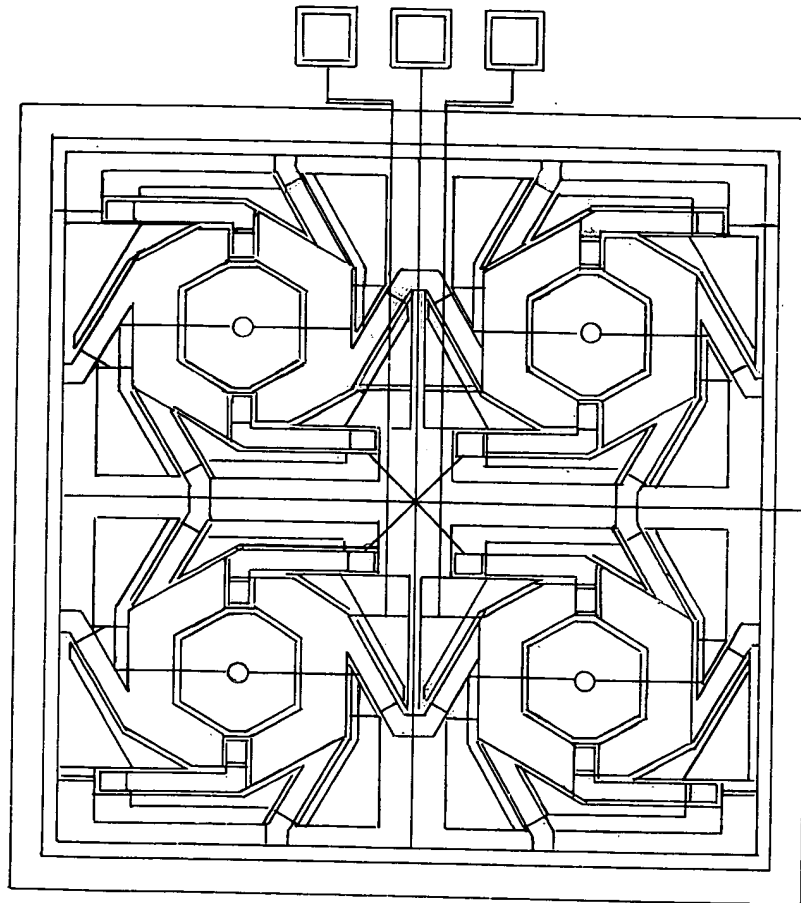


Fig. 34

3400 ↗

3500 ↗

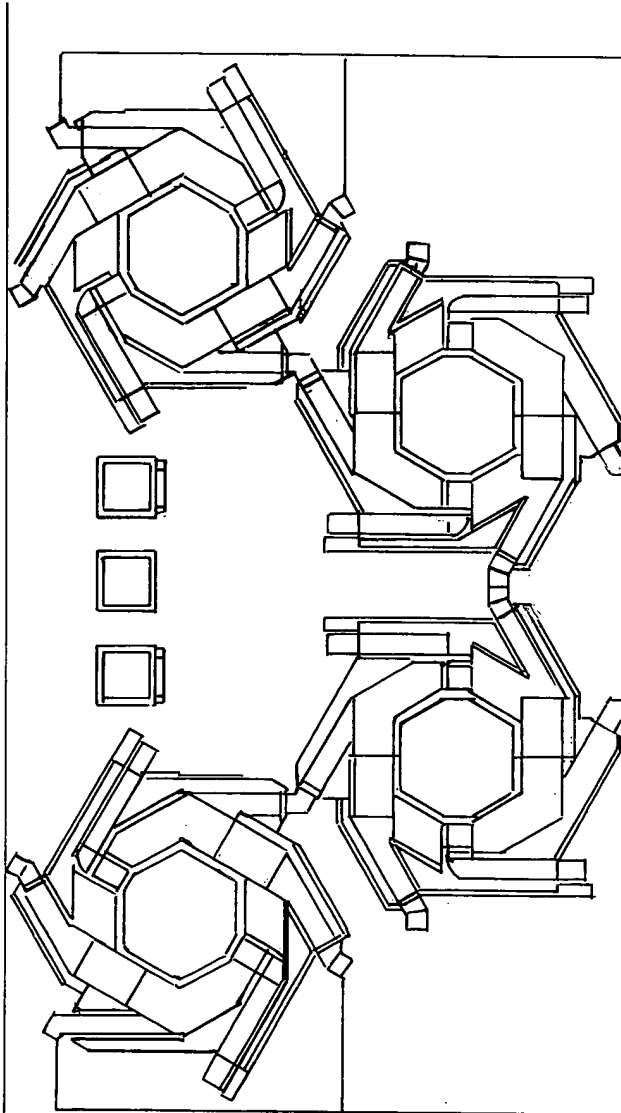


Fig. 35

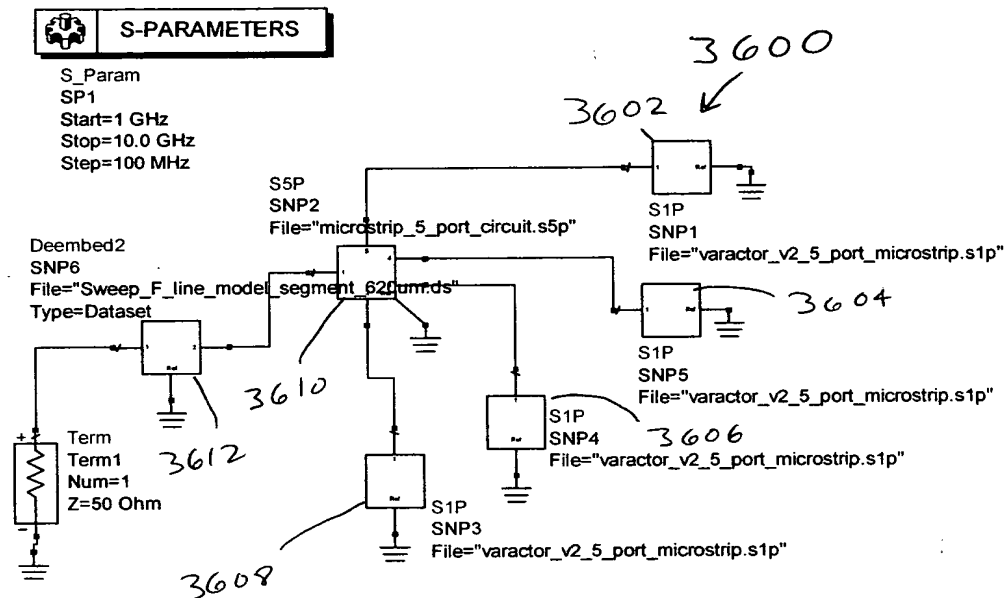


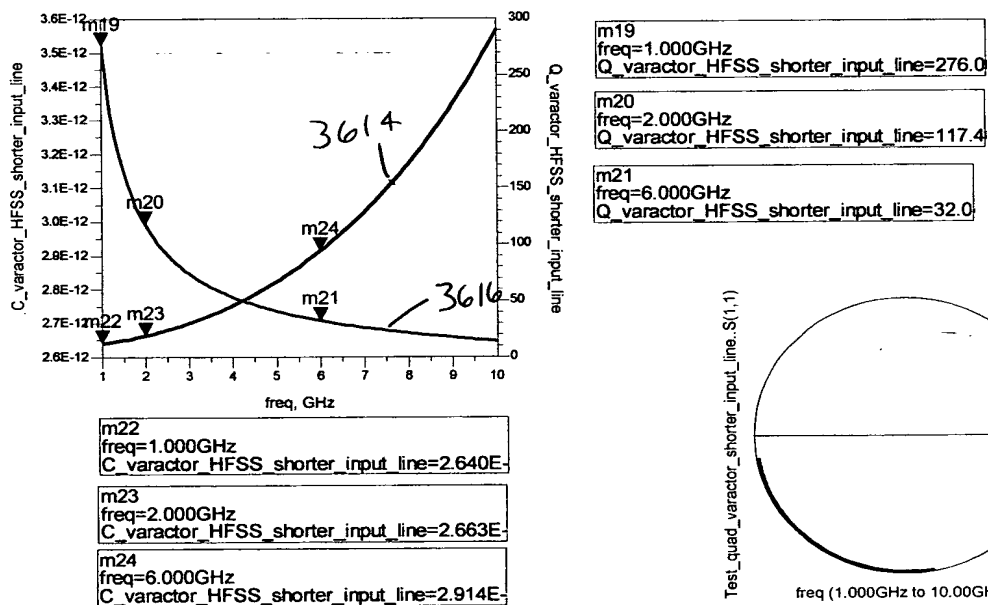
FIGURE 36A

FIGURE 36B

Eqn Z_varactor_HFSS_shorter_input_line=stoz(Test_quad_varactor_shorter_input_line..S11)

Eqn C_varactor_HFSS_shorter_input_line=im(Test_quad_varactor_shorter_input_line..Y(1,1))/(2*pi*freq)

Eqn Q_varactor_HFSS_shorter_input_line=-im(Z_varactor_HFSS_shorter_input_line)/re(Z_varactor_HFSS_shorter_input_line)



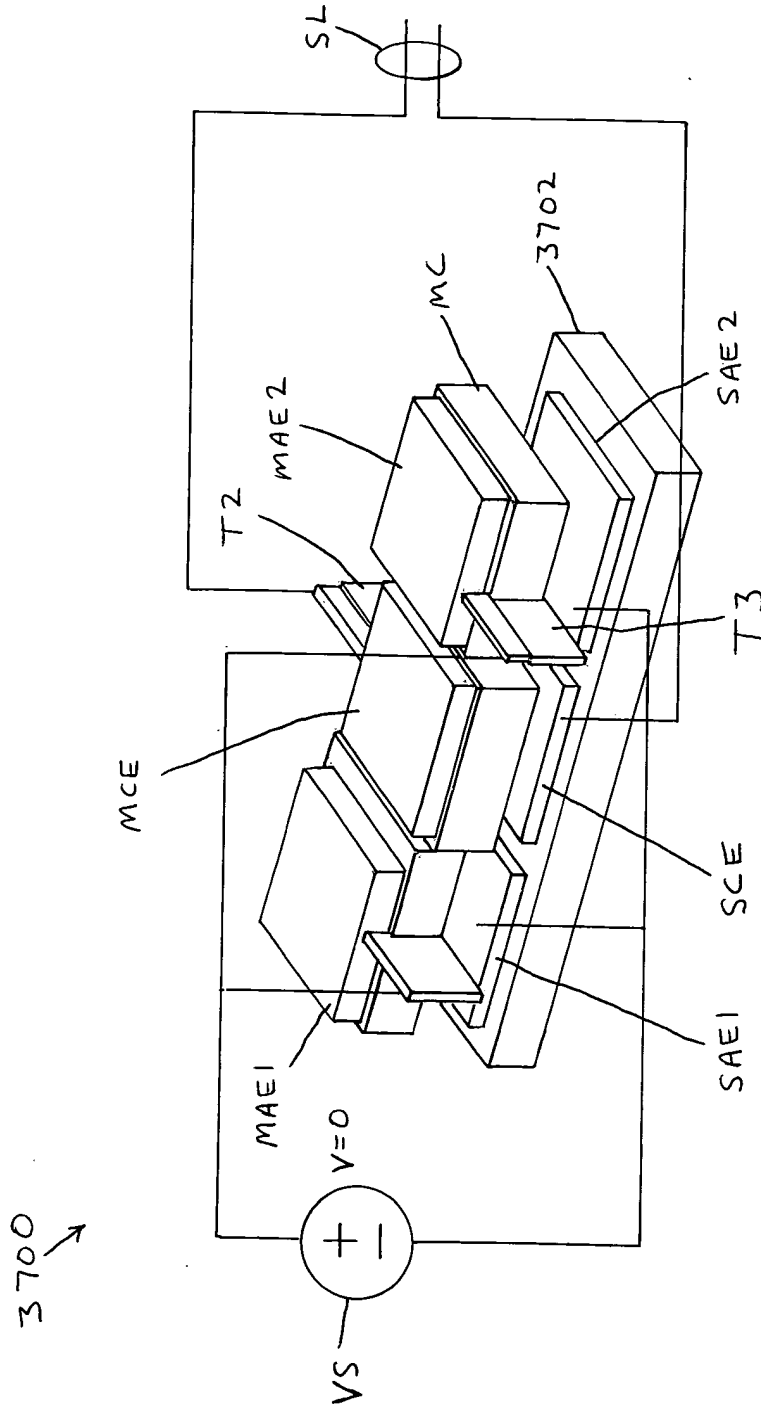


Fig. 37A

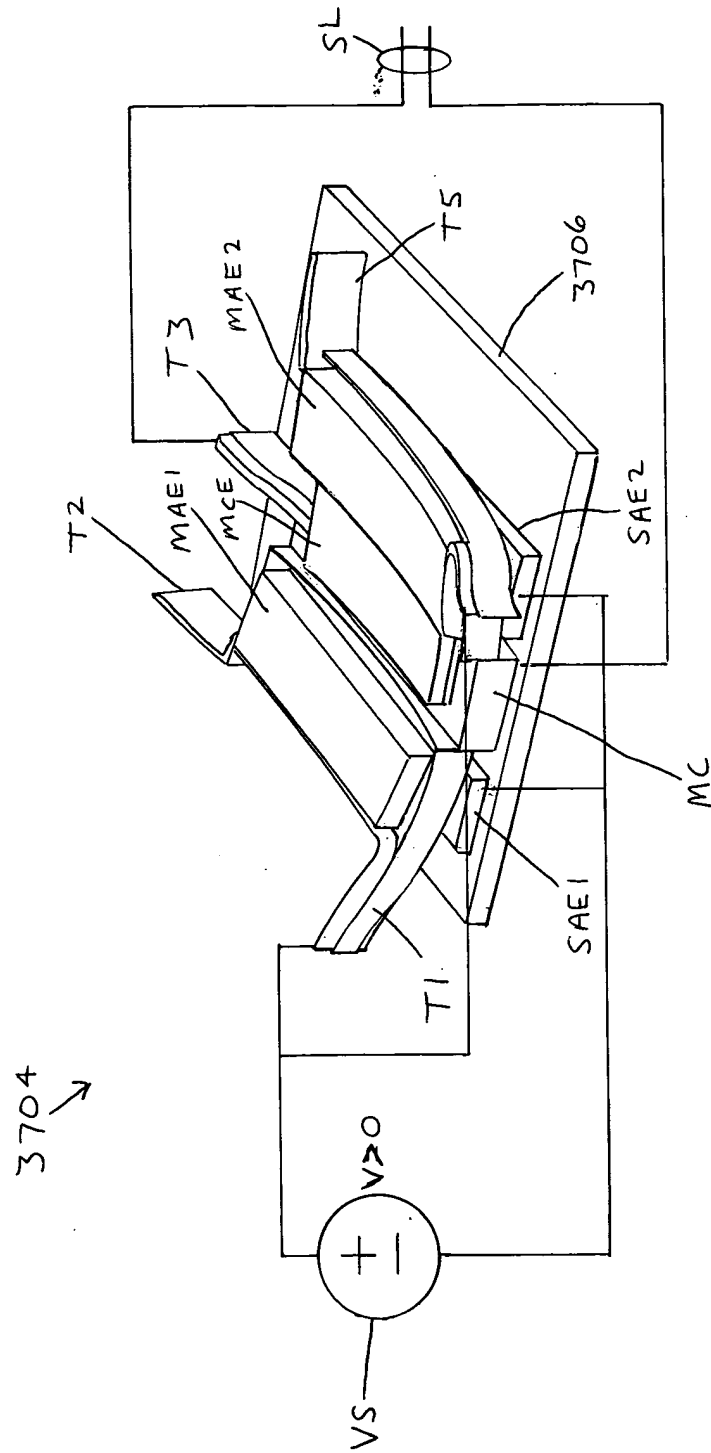


Fig. 37B

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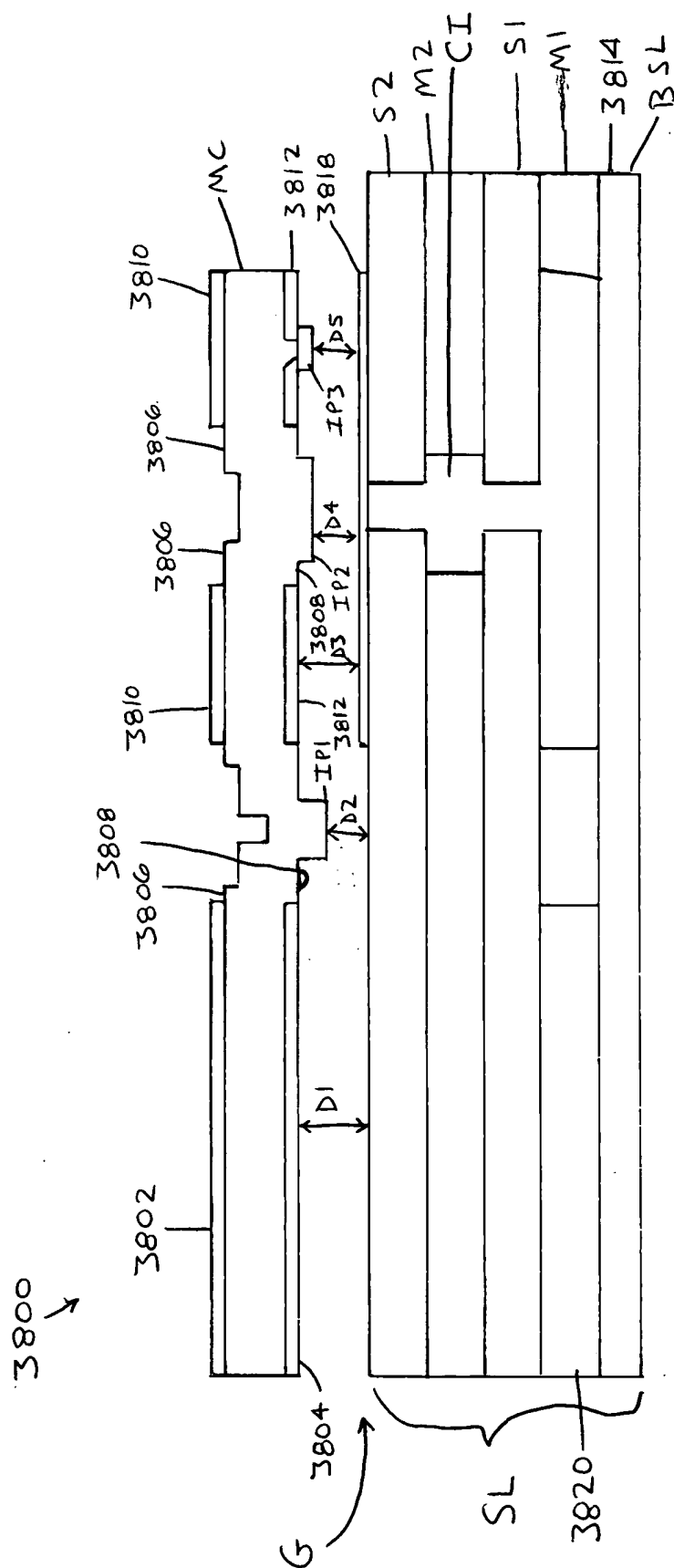


Fig. 38.

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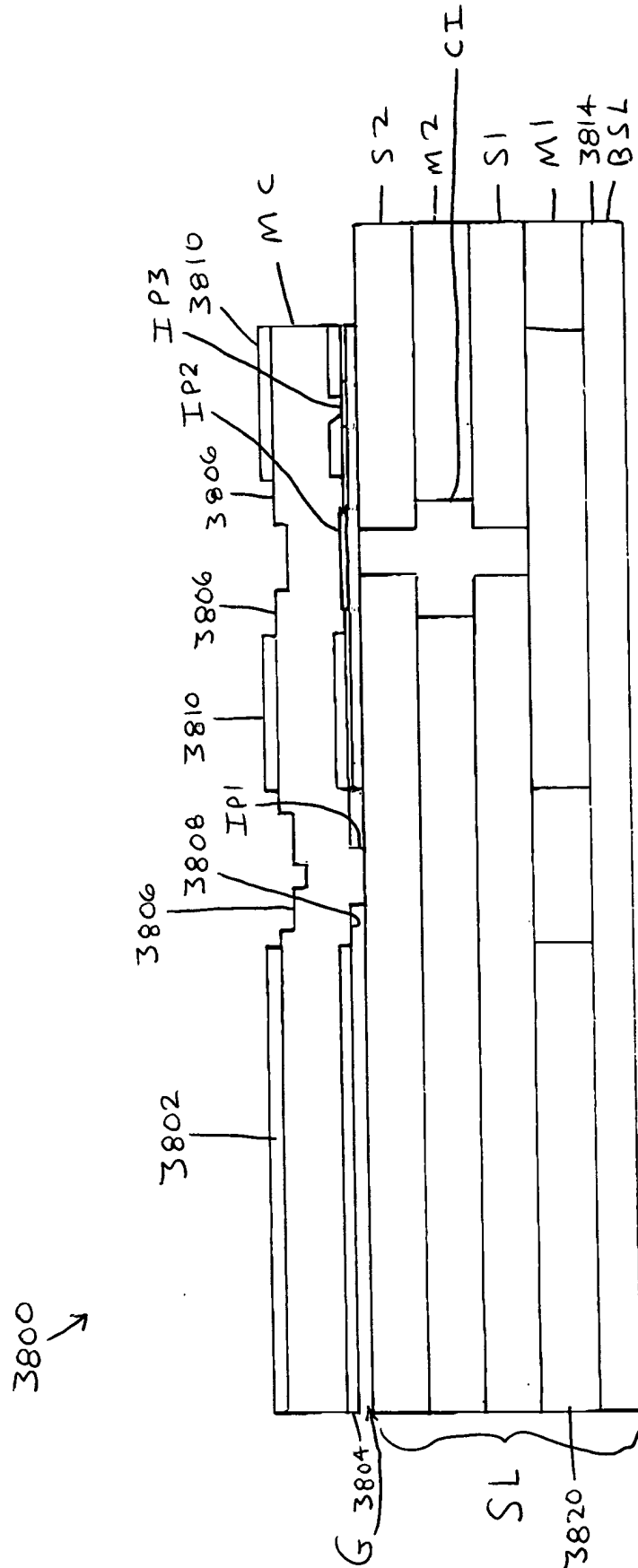


Fig. 39

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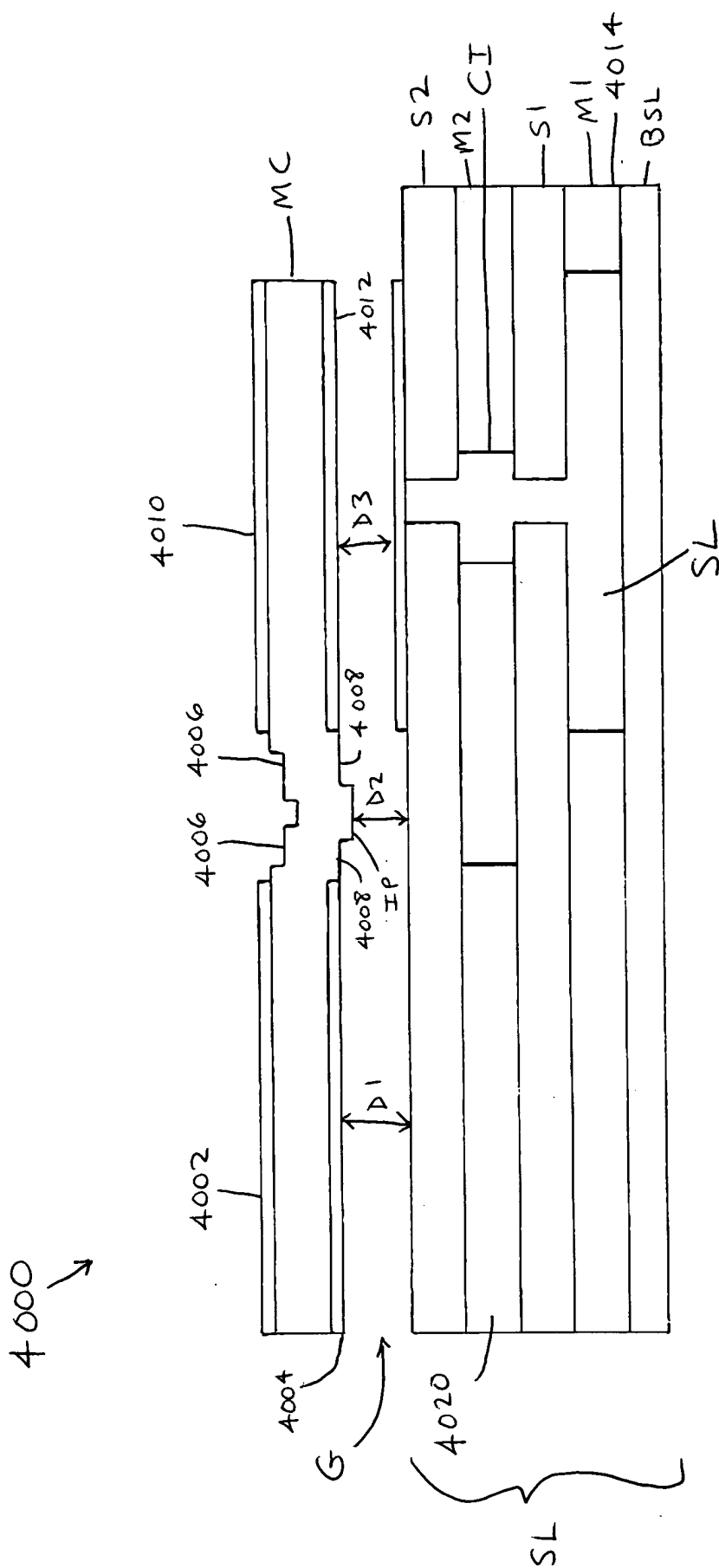


Fig. 40

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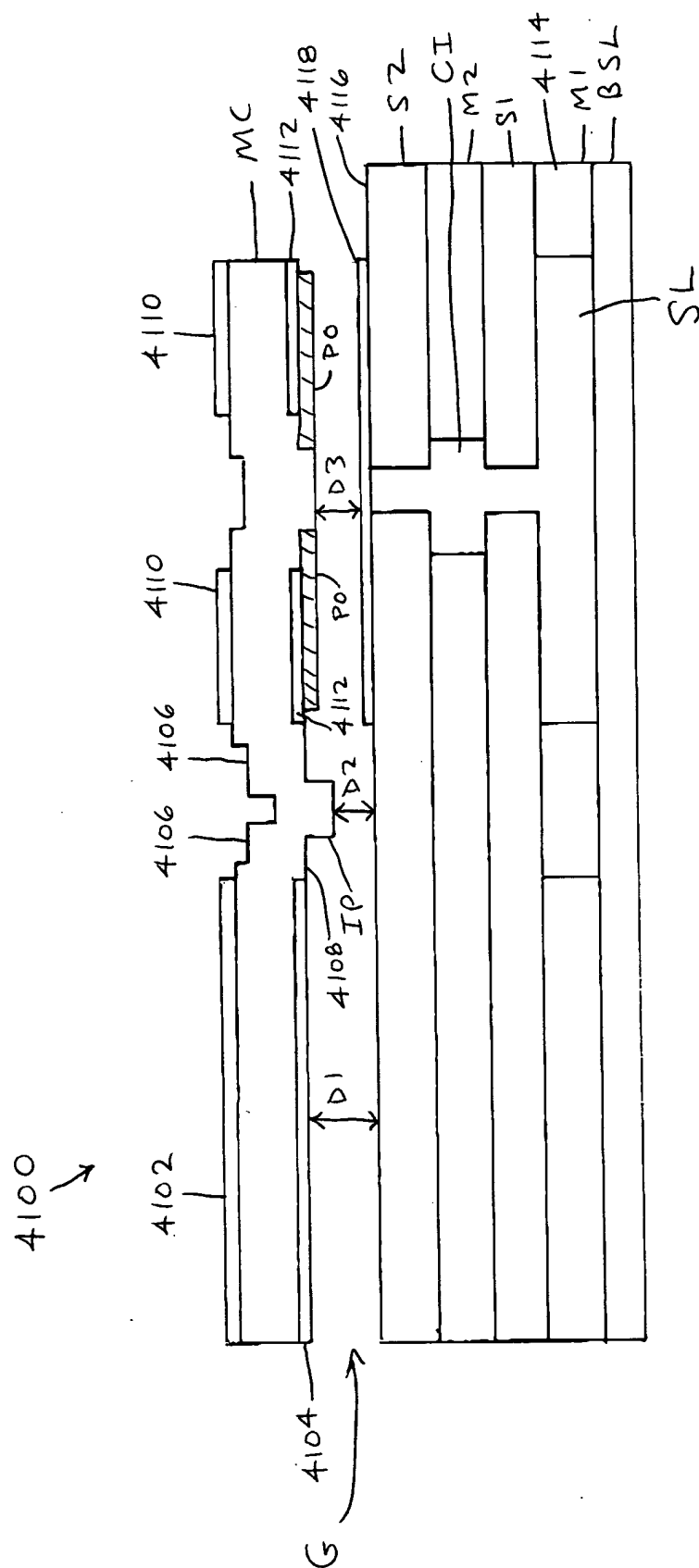


Fig. 41

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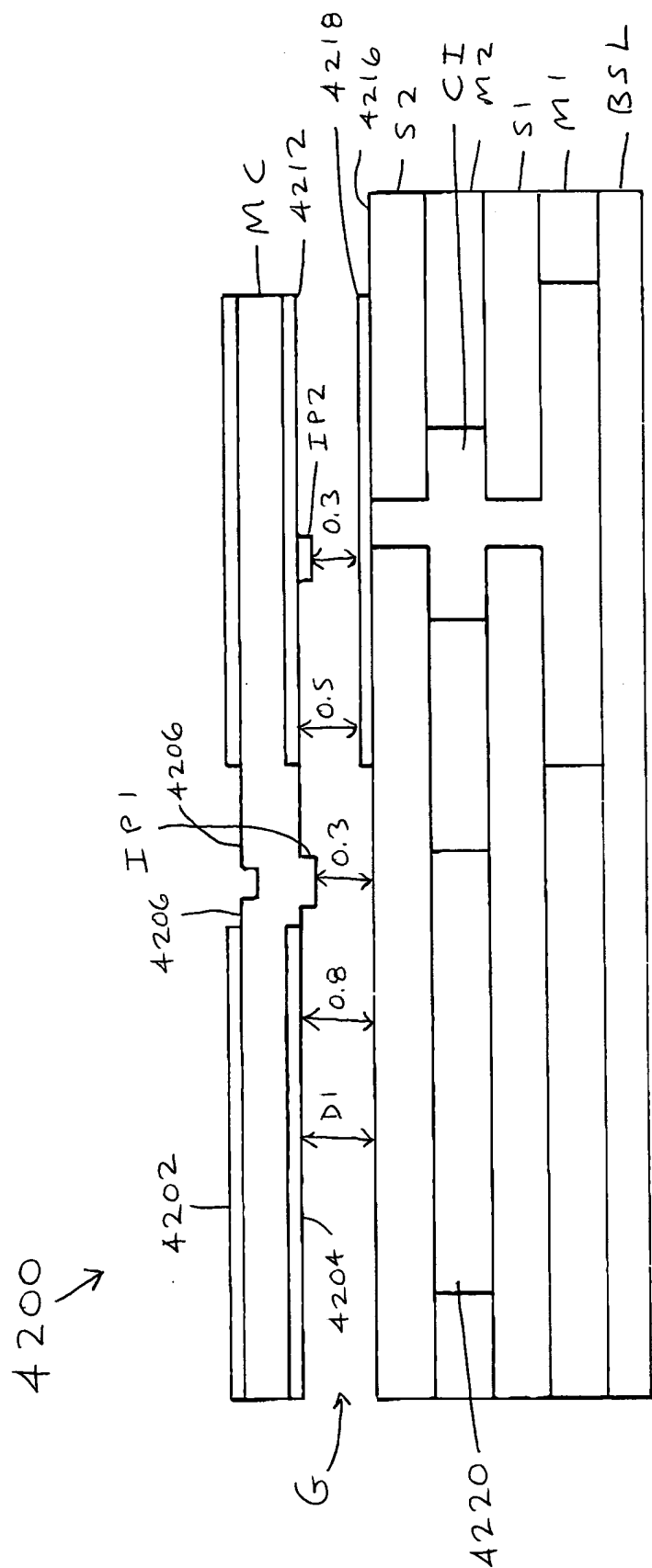


Fig. 42

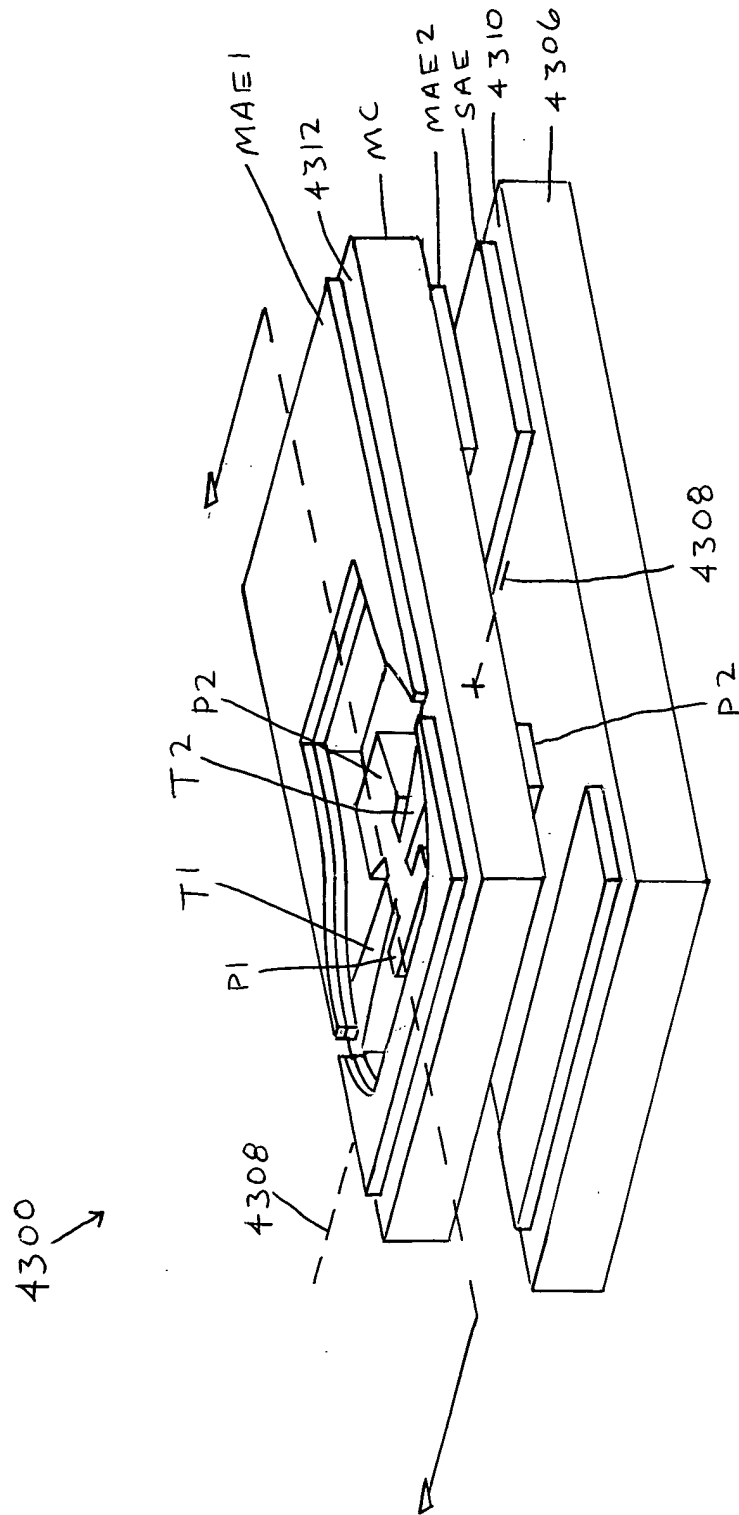


Fig. 43

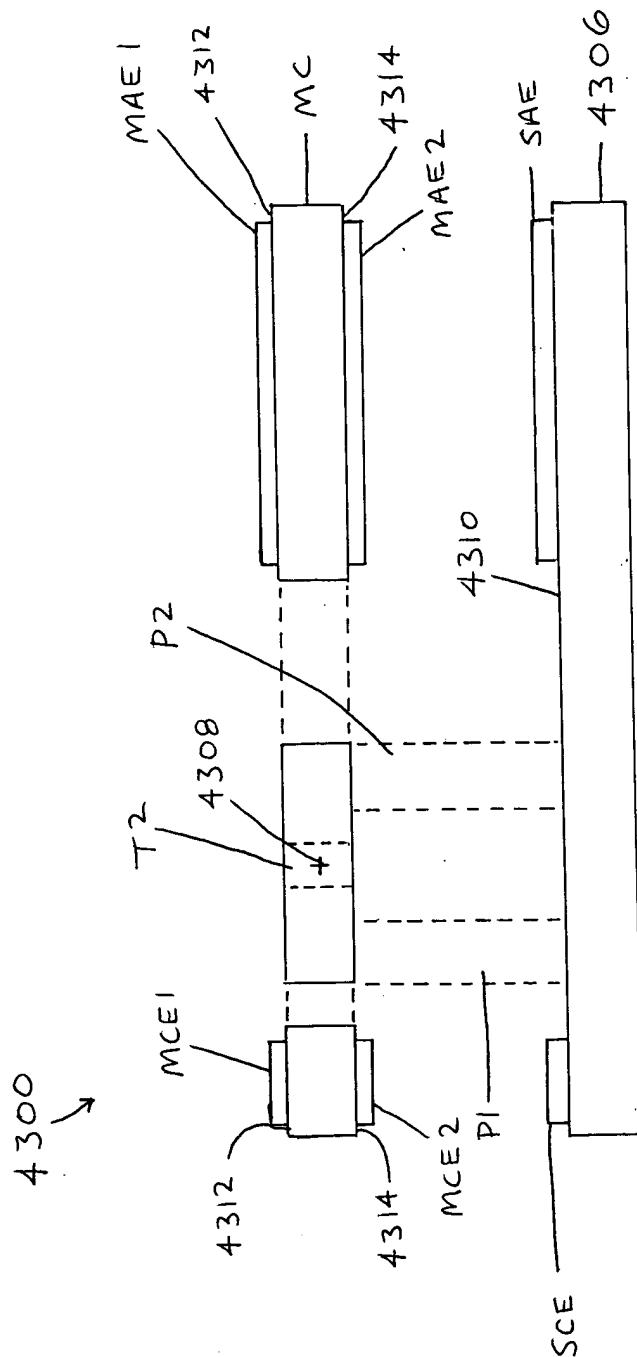


Fig. 44A

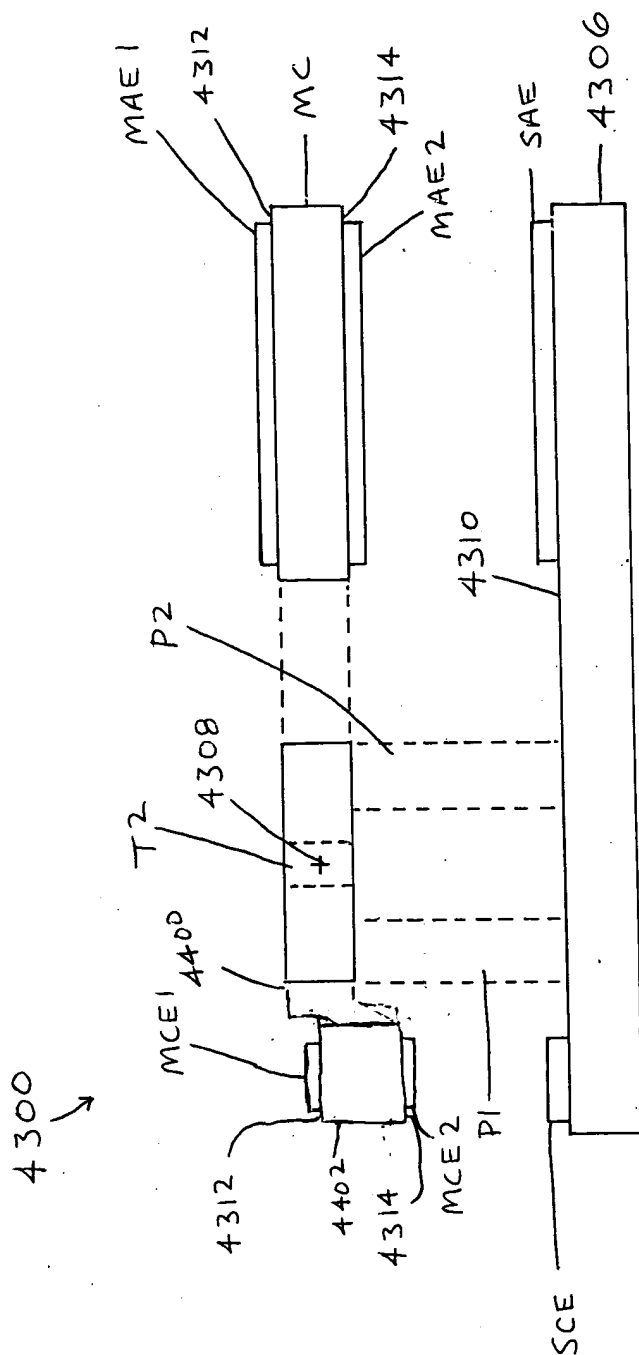


Fig. 44B

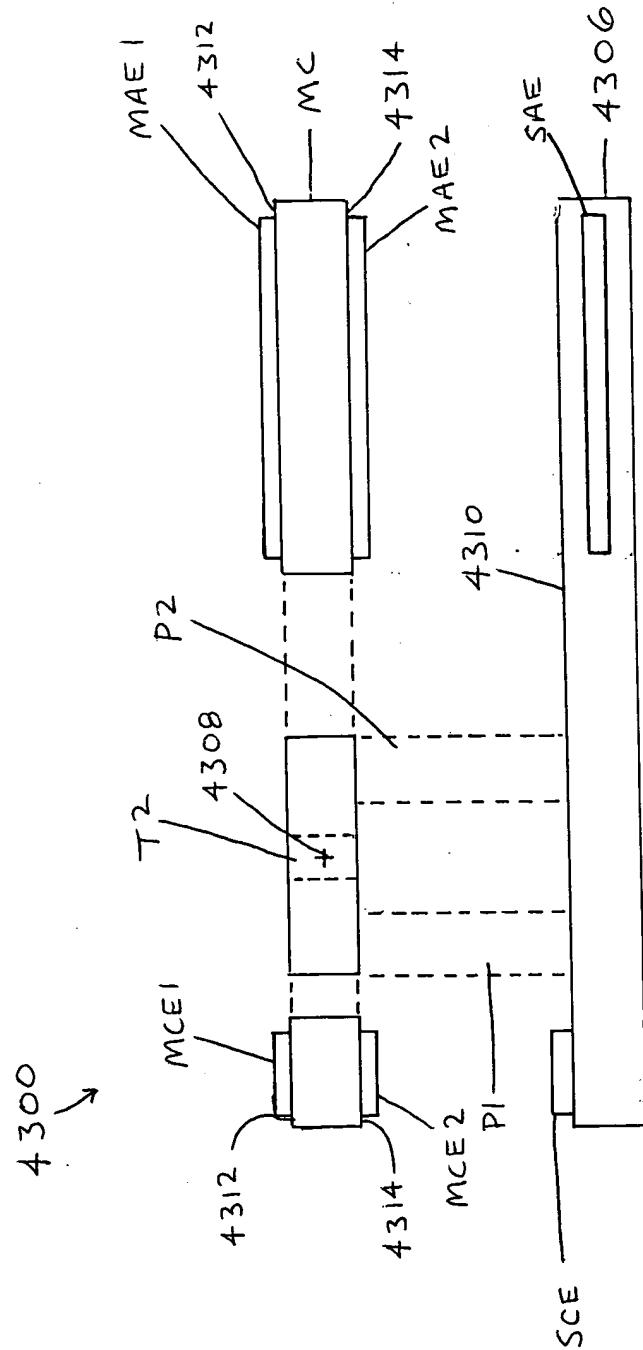


Fig. 44C

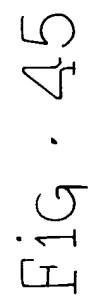


Fig. 45

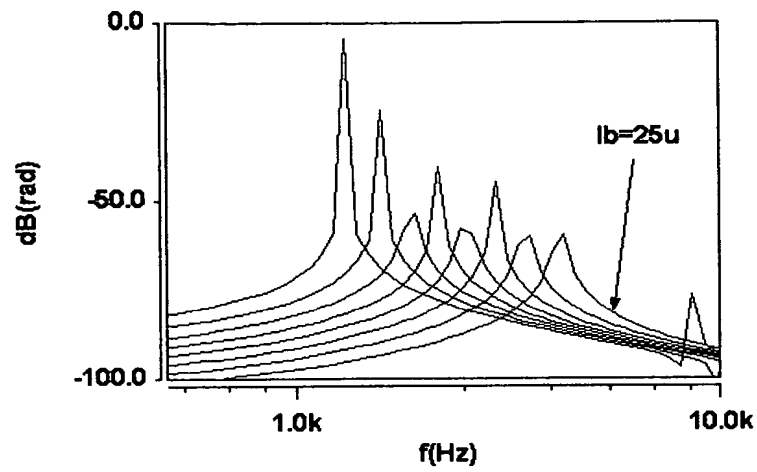
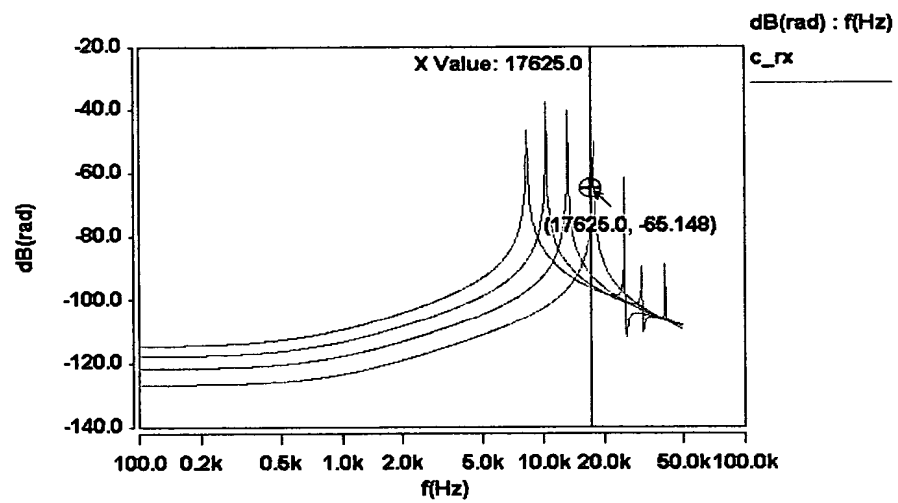


FIGURE 46

FIGURE 47



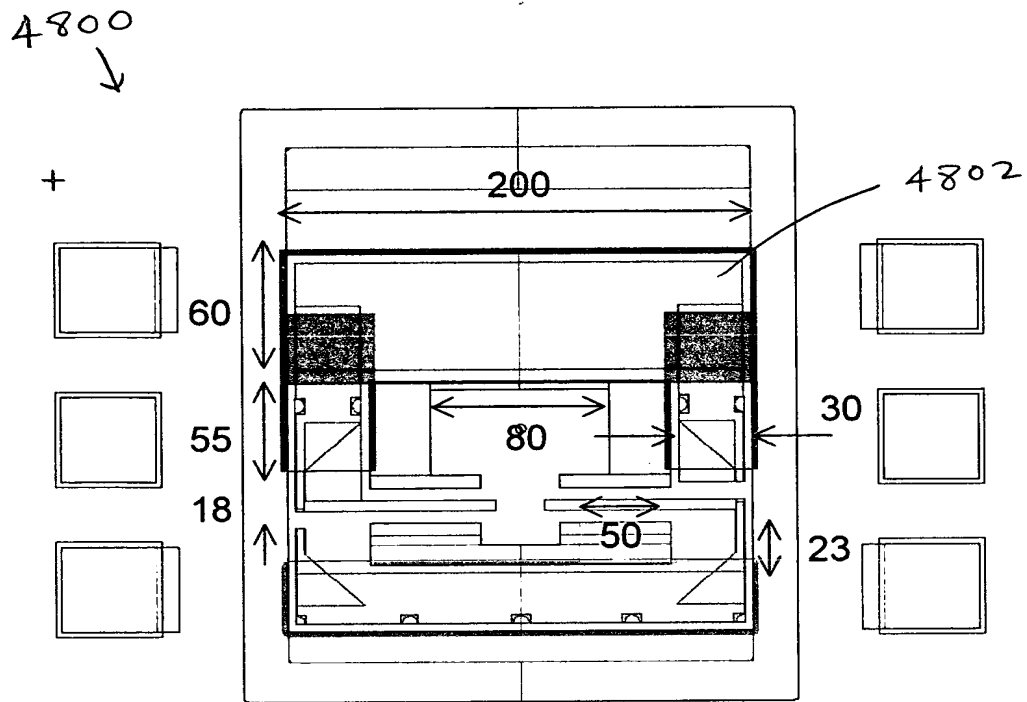


FIGURE 48

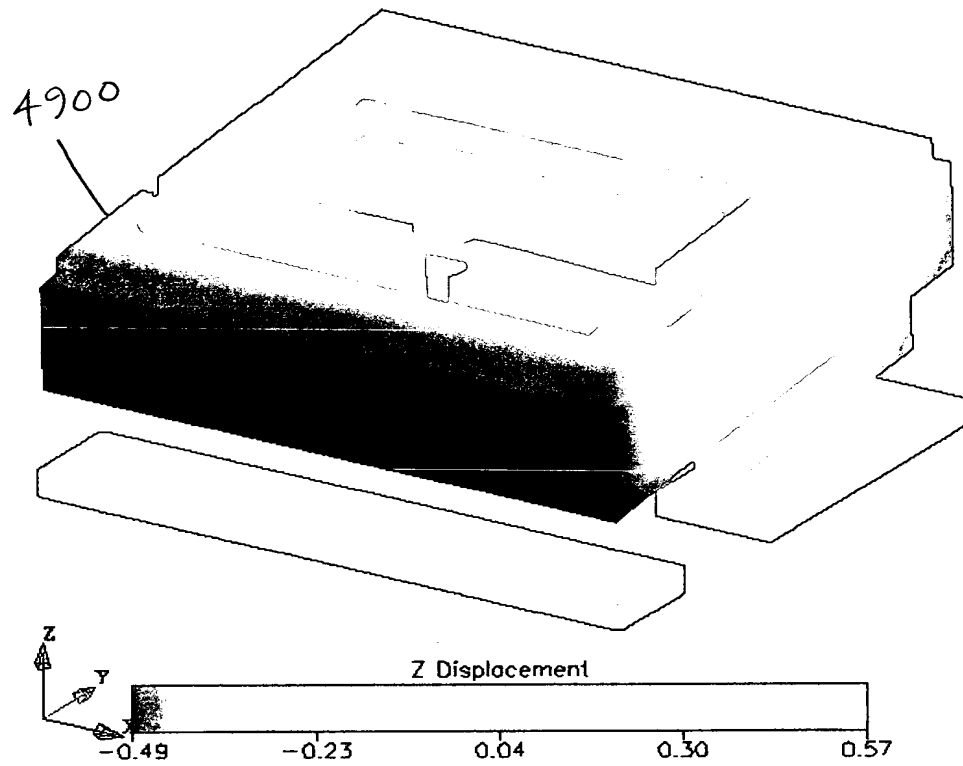
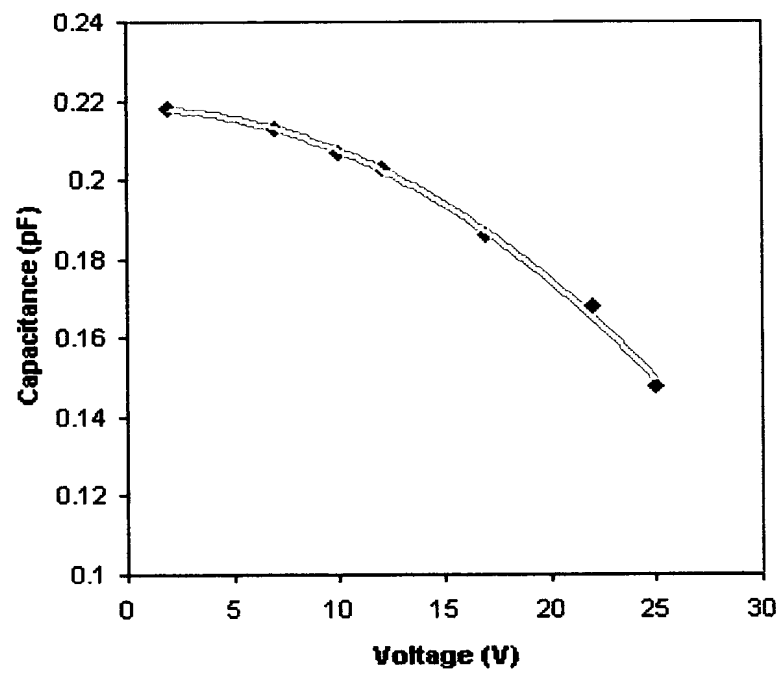


FIGURE 49

FIGURE 50



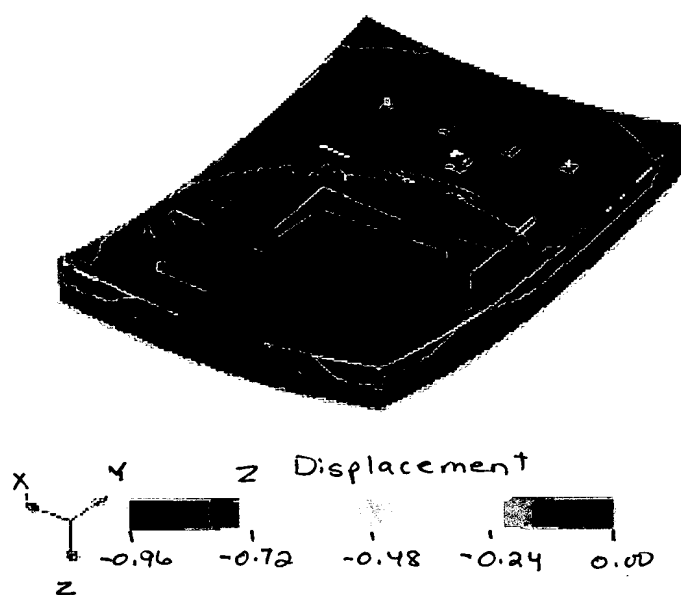


FIGURE 51

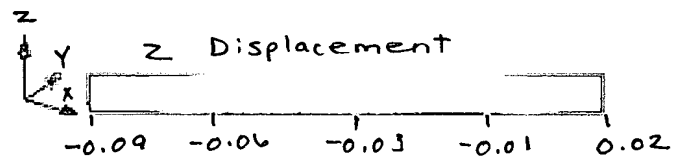
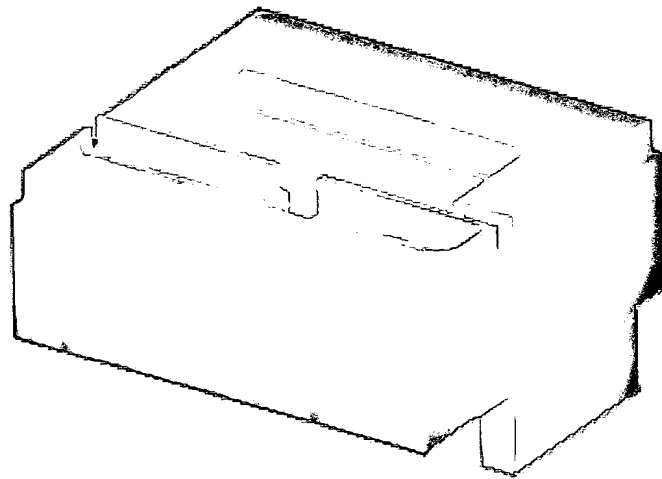


FIGURE 52

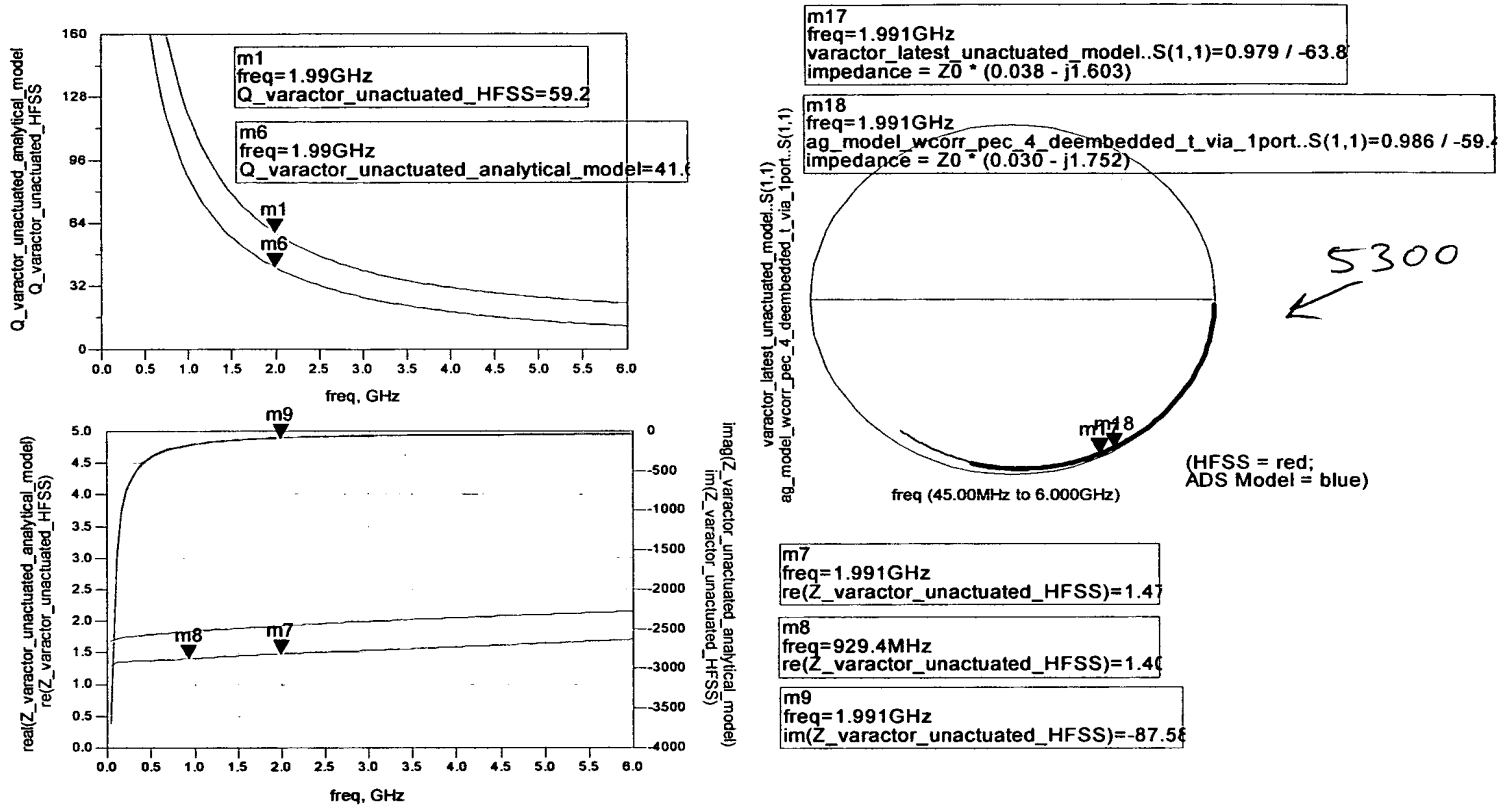


FIGURE 53